**Third Generation Partnership Project (3GPP™)**

**Meeting Report  
for  
TSG SA WG5  
meeting: 120**

**Belgrade, Serbia, 20/08/2018 to 24/08/2018**

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## 1 Opening of the meeting

TSG SA WG5 chairman Mr. Thomas Tovinger (Ericsson) opened the meeting 3GPP TSG SA WG5 #120 on Tuesday August 20th, 2018 at 8:30am.

Note: The meeting started already on Monday with SWGs.

On behalf of the host, the European Friends of 3GPP (EF3), Ms. Maryse Gardella (Nokia) welcomed the delegates to Belgrade, Serbia and explained organisational issues of the meeting.

## 2 Approval of the agenda

**S5-185000 Agenda**

*Type: agenda For: (not specified)  
 Source: WG Chairman*

**Decision:** The document was **approved**.

## 3 IPR declaration

The attention of the delegates to the meeting of this Technical Specification Group was drawn to the fact that 3GPP Individual Members have the obligation under the IPR Policies of their respective Organizational Partners to inform their respective Organizational Partners of Essential IPRs they become aware of.

The delegates were asked to take note that they were thereby invited:

- to investigate whether their organization or any other organization owns IPRs which were, or were likely to become Essential in respect of the work of 3GPP.

- to notify their respective Organizational Partners of all potential IPRs, e.g., for ETSI, by means of the IPR Information Statement and the Licensing declaration forms.

The attention of the delegates to the meeting was drawn to the fact that 3GPP activities were subject to all applicable antitrust and competition laws and that compliance with said laws was therefore required by any participant of the meeting, including the Chairman and Vice-Chairmen and were invited to seek any clarification needed with their legal counsel. The leadership would conduct the present meeting with impartiality and in the interests of 3GPP. Delegates were reminded that timely submission of work items in advance of TSG/WG meetings was important to allow for full and fair consideration of such matters.

**S5-185001 IPR and legal declaration**

*Type: other For: (not specified)  
 Source: WG Chairman*

**Decision:** The document was **noted**.

## 4 Meetings and activities reports

### 4.1 Last SA5 meeting report

**S5-185002 Report from last SA5 meeting**

*Type: report For: Approval  
 Source: MCC*

**Decision:** The document was **approved**.

**S5-185077 Report from SA5#119 Ad-hoc meeting**

*Type: report For: Approval  
 Source: MCC*

**Decision:** The document was **approved**.

### 4.2 Last SA meeting report

**S5-185003 SA5 status report at last SA meeting**

*Type: report For: (not specified)  
 Source: WG Chairman*

**Decision:** The document was **noted**.

**S5-185004 SA5 results at last SA meeting**

*Type: report For: (not specified)  
 Source: WG Chairman*

**Decision:** The document was **noted**.

### 4.3 Inter-organizational reports

## 5 Cross-SWG issues

### 5.1 Administrative issues at SA5 level

**S5-185005 Leaders meeting agenda**

*Type: agenda For: (not specified)  
 Source: WG Chairman*

**Decision:** The document was **noted**.

**S5-185006 Leaders meeting minutes**

*Type: report For: (not specified)  
 Source: WG Chairman*

**Decision:** The document was **noted**.

**S5-185007 SA5 Working Procedures**

*Type: other For: (not specified)  
 Source: WG Vice Chair (Huawei)*

**Decision:** The document was **approved**.

**S5-185008 SA5 Meeting Facility Requirements**

*Type: other For: (not specified)  
 Source: WG Vice Chair (Orange)*

**Decision:** The document was **approved**.

**S5-185009 Process for management of draft TSs/TRs**

*Type: other For: (not specified)  
 Source: WG Chairman*

**Discussion:**

SA5 chairman: no change

**Decision:** The document was **noted**.

**S5-185010 CR Quality Check**

*Type: other For: (not specified)  
 Source: MCC*

**Decision:** The document was **noted**.

**S5-185011 Status of email approvals**

*Type: other For: (not specified)  
 Source: WG Vice Chair (Orange)*

**Discussion:**

will be provided after SA5 meeting by SA5 vice-chairman (Orange)

**Decision:** The document was **not treated**.

### 5.2 Technical issues at SA5 level

**S5-185346 Minutes of virtual meeting on 5G restructured specifications on July 19th 2018**

*Type: report For: Approval  
 Source: OAM&P SWG chair (Huawei)*

**Decision:** The document was **approved**.

**S5-185347 Minutes of virtual meeting on 5G restructured specifications on July 25th 2018**

*Type: report For: Approval  
 Source: OAM&P SWG chair (Huawei)*

**Decision:** The document was **approved**.

### 5.3 Liaison statements at SA5 level

**S5-185042 LS from GSMA to SA5 on Publication of new paper on network slicing and future plans**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: GSMA NEST*

**Discussion:**

Deutsche Telekom: GSMA wanted to come up with a generic definition of network slicing and we should check whether this is sufficient for us

Nokia: is more a catalogue of slice types so more commercial, SA5 does not need to define a template based approach (we discussed it a month ago), we can check that our attributes are mapping; what GSMA is doing is more a language for slices that operators will use to describe what sort of slice they want;

NEC: these details are not described in the LS

Nokia: NGMN inputs were taken into account in SA1, SA2 and SA5 and having now different inputs from GSMA at the end of REL-15 is disturbing

Deutsche Telekom: we should rather check whether what they do is aligned with SA5 and if not we can tell them this

conclusion: orginally S5-185434 was allocated for a reply but finally the LSin was postponed

**Decision:** The document was **postponed**.

**S5-185434 Draft reply LS to GSMA\_LS = S5-185042 on Publication of new paper on network slicing and future plans (to: GSMA NEST; cc: -; contact: Ericsson)**

*Type: LS out For: approval  
 to GSMA NEST  
 Source: SA5 chairman (Ericsson)*

**Decision:** The document was **withdrawn**.

**S5-185044 LS from ETSI NTECH to SA5 on Information about publication of ETSI TS 103 195-2 v1.1.1 “An Architectural Reference Model for Autonomic Networking, Cognitive Networking and Self-Management”**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: ETSI TC NTECH*

**Discussion:**

conclusion: no LS answer

**Decision:** The document was **noted**.

**S5-185050 LS out from SA2 to SA5 on 5G GUTI and EPS Interworking**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: S2-186176*

**Discussion:**

SA5 chairman: we will take it into account

conclusion: no LS answer

**Decision:** The document was **noted**.

**S5-185053 LS from ITU-T SG2 to SA5 on Methodology harmonization (Reply to “3GPP TSG SA5 - Tdoc S5-176437 -E” and “3GPP TSG SA5 - Tdoc S5-181375 –E”)**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: ITU-T SG2*

**Discussion:**

SA5 chairman: worried about duplication, so sees no difference; we will keep this LS open to see whether we reply from this meeting or from the next meeting

**Decision:** The document was **replied to in S5-185553**.

**S5-185553 Reply to ITU-T SG2 LS63 = S5-185053 on methodology harmonization (to: ITU-T SG2; cc: -; contact: Ericsson)**

*Type: LS out For: approval  
 to ITU-T SG2  
 Source: Ericsson*

**Discussion:**

SA5 chairman: text was assuming that we would agree a REL-16 WI which we did

**Decision:** The document was **approved**.

**S5-185055 Reply LS from TSG SA cc SA5 to “5G for Industrial Communication”**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: TSG SA*

**Discussion:**

conclusion: no LS answer

**Decision:** The document was **noted**.

**S5-185348 LS from BBF cc SA5 Response to 3GPP SA2 liaison S2-183036 on ‘general status of work**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: BBF*

**Discussion:**

conclusion: no LS answer

**Decision:** The document was **noted**.

### 5.4 SA5 meeting calendar

**S5-185012 SA5 Meeting Calendar**

*Type: other For: (not specified)  
 Source: WG Chairman*

**Discussion:**

SA5 chairman: tentative dates, will inform also SA3 to reduce SA3/SA5 clashes

**Decision:** The document was **noted**.

### 5.5 Review of the Work Plan

**S5-185013 Deliverables due for the NEXT SA Plenary**

*Type: other For: (not specified)  
 Source: MCC*

**Discussion:**

SA5 chairman: marked in yellow means that we need to submit this to the next SA meeting

Ericsson: 32.159 is just for the next REL, there is a WID update (S5-185078)

SA5 vice-chairman (Huawei): we will handle the 32.159 topic in the OAM session

SA5 charging SWG chair (Nokia): we will bring a new REL-15 WI to SA #81 together with an exception request

**Decision:** The document was **noted**.

**S5-185014 Ongoing SA5 WIDs and SIDs**

*Type: other For: (not specified)  
 Source: WG Vice Chair (Huawei)*

**Decision:** The document was **noted**.

**S5-185015 3GPP SA5 Work Plan**

*Type: other For: (not specified)  
 Source: MCC*

**Decision:** The document was **noted**.

**S5-185016 Work Plan status**

*Type: other For: (not specified)  
 Source: WG Chair*

**Decision:** The document was **not treated**.

## 6 OAM&P

SA5 vice-chairman (Huawei) chaired AI 6.1, 6.2, 6.3, 6.4.1 (on Mon/Tue/Wed evening), 6.4.2 (Mon/Tue), 6.4.3 (on Mon), 6.4.5 (on Tue), 6.4.6 (on Tue), 6.4.7 (on Tue), 6.4.8 (on Tue)

SA5 chairman (Ericsson) chaired 6.4.2 (on Wed morning), 6.4.3 (on Wed morning), 6.6.1-6.6.5 (on Thu afternoon)

SA5 vice-chairman (Orange) chaired 6.4.5 (on Wed afternoon and on Thu morning), 6.4.3 (on Thu morning), 6.4.1 (on Thu morning)

### 6.1 OAM&P Plenary

**S5-185017 Time Plan for OAM&P**

*Type: other For: (not specified)  
 Source: WG Vice Chair (Huawei)*

**Discussion:**

SA5 vice-chairman (Huawei): a few less documents this time, still 8min per Tdoc which could be better

**Decision:** The document was **revised to S5-185414**.

**S5-185414 Time Plan for OAM&P**

*Type: other For: -  
 Source: WG Vice Chair (Huawei)*

(Replaces S5-185017)

**Decision:** The document was **noted**.

**S5-185019 OAM&P SWG action list**

*Type: other For: (not specified)  
 Source: WG Vice Chair (Huawei)*

**Discussion:**

SA5 vice-chairman (Huawei): no comments so far, we will come back to it on Fri morning

**Decision:** The document was **revised to S5-185456**.

**S5-185456 OAM&P SWG action list**

*Type: other For: -  
 Source: WG Vice Chair (Huawei)*

(Replaces S5-185019)

**Decision:** The document was **noted**.

**S5-185045 Resubmitted LS from RAN2 to SA5 on Bluetooth/WLAN measurement collection in MDT**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: R2-1808793*

**Discussion:**

SA5 vice-chairman (Huawei): open for future contributions, no need to reply at the moment

**Decision:** The document was **noted**.

**S5-185046 LS from RAN2 to SA5 on adding measurements on average number of total active UEs**

*Type: LS in For: (not specified)  
 Original outgoing LS: R2-1809158, to -, cc -  
 Source: R2-1809158*

**Discussion:**

MCC: LS is withdrawn since attachment of the LSin was missing, see S5-185365 instead

**Decision:** The document was **withdrawn**.

**S5-185043 LSout to various organisations on usage of NFV Specifications**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: ETSI ISG NFV*

**Discussion:**

Nokia: will need more detailed checking

SA5 vice-chairman (Huawei): reallocate the Tdoc to AI 6.1

Tdoc is moved from AI 5.3 to AI 6.1

**Decision:** The document was **postponed**.

**S5-185365 Reply LS to S5-1812392 on adding measurements on average number of total active UEs (R2-1809158; to: SA5; cc: -; contact: Huawei)**

*Type: LS in For: -  
 Original outgoing LS: R2-1809158, to SA5, cc -  
 Source: R2-1809158*

(Replaces S5-185046)

**Abstract:**

note: R2-1809158 did not include attachment R2-1808804

**Discussion:**

Huawei: has a related CR in S5-185274

SA5 vice-chairman (Huawei): do we need to reply?

Huawei: we allocate an LSout already

**Decision:** The document was **replied to in S5-185402**.

**S5-185402 Draft reply to R2-1809158 = S5-185365 on adding measurements on average number of total active UEs (to: RAN2; cc: -; contact: Huawei)**

*Type: LS out For: approval  
 to RAN2  
 Source: Huawei*

**Decision:** The document was **revised to S5-185584**.

**S5-185584 Draft reply to R2-1809158 = S5-185365 on adding measurements on average number of total active UEs (to: RAN2; cc: -; contact: Huawei)**

*Type: LS out For: approval  
 to RAN2  
 Source: Huawei*

(Replaces S5-185402)

**Discussion:**

Huawei: to be revised since S5-185405 had to be revised

**Decision:** The document was **revised to S5-185594**.

**S5-185594 Reply to R2-1809158 = S5-185365 on adding measurements on average number of total active UEs (to: RAN2; cc: -; contact: Huawei)**

*Type: LS out For: approval  
 to RAN2  
 Source: SA5*

(Replaces S5-185584)

**Decision:** The document was **approved**.

**S5-185047 LS from RAN2 to SA5 on L2 measurements**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: R2-1810957*

**Discussion:**

Cisco: there is an error which will have impact on the reply LS

Ericsson: expects an LS from RAN3 (before we can agree our pCR 552)

**Decision:** The document was **replied to in S5-185403**.

**S5-185403 Draft reply LS to R2-1810957 = S5-185047 on L2 measurement (to: RAN2; cc: RAN1, RAN3; contact: Ericsson)**

*Type: LS out For: approval  
 to RAN2, cc RAN1, RAN3  
 Source: Ericsson*

**Discussion:**

SA5 vice-chairman (Huawei): TS 28.552 will be presented for approval and not approved

Nokia: scope is not really enlarged

**Decision:** The document was **revised to S5-185585**.

**S5-185585 Reply LS to R2-1810957 = S5-185047 on L2 measurement (to: RAN2; cc: RAN1, RAN3; contact: Ericsson)**

*Type: LS out For: approval  
 to RAN2, cc RAN1, RAN3  
 Source: SA5*

(Replaces S5-185403)

**Decision:** The document was **approved**.

**S5-185048 Reply LS cc SA5 on adding new service type in QMC reporting**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: R3-183320*

**Discussion:**

SA5 vice-chairman (Huawei): SA5 is only in cc

conclusion: no LS answer

**Decision:** The document was **noted**.

**S5-185049 Reply LS from SA2 cc SA5 on LS to 3GPP on QoS Prediction**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: S2-185846*

**Discussion:**

SA5 vice-chairman (Huawei): SA5 is in cc, SA2 is meeting this week in Sophia Antipolis

conclusion: no LS answer

**Decision:** The document was **noted**.

**S5-185051 LS from SA2 to SA5 on Data Analytics in SA WG2/NWDAF**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: S2-187617*

**Discussion:**

Huawei: we need to send them a reply

Nokia: it seems the assumption is that RAN WGs resp. for TM, we work on TM data collection so we need to clarify this

Ericsson: is NWDAF a network or management function?

Nokia: network function

Ericsson: we did not have such a case before

NEC: some key issues in 524, should we address them as well?

Huawei: we can coordinate an answer

Nokia: we do not care much who consumes the data, but worksplit to be clarified

**Decision:** The document was **replied to in S5-185404**.

**S5-185404 Reply to S2-187617 = S5-185051 on Data Analytics in SA WG2 NWDAF (to: SA2; cc: SA, RAN, RAN3, RAN2; contact: Huawei)**

*Type: LS out For: approval  
 to SA2, cc SA, RAN, RAN3, RAN2  
 Source: SA5*

**Discussion:**

LS was sent out on Thu morning of SA5 #120

**Decision:** The document was **approved**.

**S5-185052 Resubmitted Reply LS from SA4 to SA5 on Attributes for QoE measurement collection**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: S4-180240*

**Discussion:**

SA5 vice-chairman (Huawei): any progress?

Ericsson: afraid not so plans to have an input to next SA5 meeting

SA5 vice-chairman (Huawei): so we resubmit it to next meeting

**Decision:** The document was **postponed**.

**S5-185054 LS from ITU-T SG15 to SA5 on cooperation on REST-based network management framework**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: ITU-T SG15*

**Discussion:**

SA5 vice-chairman (Huawei): is for information, includes proposal to create a WI

Huawei: suggest to discuss in SA5 first (they ask to change the format) before replying

SA5 vice-chairman (Huawei): replying from this SA5 meeting?

Huawei: we can see

Nokia: we have similar discussion with CT; we should have some opinion in SA5 whether we want this alignment or not

SA5 vice-chairman (Huawei): offline discussion, we check the status on Thu or Fri again

**Decision:** The document was **postponed**.

**S5-185018 OAM Executive Report**

*Type: report For: (not specified)  
 Source: WG Vice Chair (Huawei)*

**Discussion:**

SA5 vice-chairman (Huawei): EPC CUPS had no exception sheet so needs to revise the report

**Decision:** The document was **revised to S5-185641**.

**S5-185641 OAM Executive Report**

*Type: report For: -  
 Source: WG Vice Chair (Huawei)*

(Replaces S5-185018)

**Decision:** The document was **noted**.

**S5-185020 Minutes of OAM&P SWG opening session**

*Type: report For: (not specified)  
 Source: WG Vice Chair (Huawei)*

**Decision:** The document was **noted**.

### 6.2 New OAM&P Work Item proposals

**S5-185076 New WID on energy efficiency in 5G networks**

*Type: WID new For: Agreement  
 Source: Orange*

**Discussion:**

Intel: backward compatibility with existing specs?

Orange: reusing former work

NEC: energy consumption is different from energy efficiency

Orange: yes, is relative to the data volume; energy saving is when you increase the efficiency

NEC: energy saving can mean that you reduce the service

Huawei: 4th bullet in objectives: "information model" could better be changed to "solution"

Ericsson: "taking into account and/or ITU-T SG5 Q6", so far we did not consider ITU requirement in the study

Orange: they are starting something (we are talking here about live networks and not labs)

SA5 vice-chairman (Huawei): supporting companies need to be updated

**Decision:** The document was **revised to S5-185429**.

**S5-185429 New WID on energy efficiency in 5G networks**

*Type: WID new For: Agreement  
 Source: Orange*

(Replaces S5-185076)

**Decision:** The document was **revised to S5-185586**.

**S5-185586 New WID on energy efficiency in 5G networks**

*Type: WID new For: Agreement  
 Source: Orange*

(Replaces S5-185429)

**Decision:** The document was **agreed**.

**S5-185136 Discussion paper on tenant management**

*Type: discussion For: Endorsement  
 Source: Huawei*

**Discussion:**

proposal: SA5 WG is asked to study the use cases, requirements and potential solutions to enhance 3GPP management system under the context of tenant concept

Nokia: a lot of contents copied from other places but not relevant for slicing; justification for proposal missing

China Mobile: we should first define "tenant"

Nokia: user groups are not vertical industry groups, these are users of UEs

SA5 vice-chairman (Huawei): there is also a corresponding SID in S5-185137

**Decision:** The document was **noted**.

**S5-185137 SID Study on 5G network and network slicing tenant management**

*Type: SID new For: Agreement  
 Source: Huawei*

**Discussion:**

Nokia: recursive definition of a SI is not acceptable ("Also, the study will define the tenant term and concept"); user group and tenant are different things; objective does not talk about "tenant"

SA5 vice-chairman (Huawei): we keep the Tdoc open for offline discussion until the end of the week

**Decision:** The document was **revised to S5-185455**.

**S5-185455 SID Study on 5G network and network slicing tenant management**

*Type: SID new For: Agreement  
 Source: Huawei*

(Replaces S5-185137)

**Decision:** The document was **agreed**.

**S5-185138 WID Intent driven management service for mobile network**

*Type: WID new For: Agreement  
 Source: Huawei*

**Discussion:**

Nokia: difference between intent-driven and intent-based? First time that we see "intent-driven"; jumping in a WI without any study is a bit brave; seems to be a typical SON scenario but this is not mentioned, so is it SON or not?

Huawei: this is not exactly SON

Nokia: but as intent is included automatically, it is automation so SON

Orange: intention to specify the intent in a way?

Huawei: no concrete plans for a protocol already

Ericsson: still wondering why you do not want to link it to SON, policy based scenarios?

Huawei: for LTE we had a fixed SON case; here we want to be broader

Ericsson: but we will need a study; wondering about the statement that it is not really "automation"

**Decision:** The document was **revised to S5-185430**.

**S5-185430 WID Intent driven management service for mobile network**

*Type: WID new For: Agreement  
 Source: Huawei*

(Replaces S5-185138)

**Discussion:**

SA5 vice-chairman (Huawei): we keep the Tdoc open for offline discussion until the end of the week

SA5 vice-chairman (Huawei): is not the final version, coordination with other groups to be clarified, remove SA3

Nokia: add Nokia

**Decision:** The document was **revised to S5-185587**.

**S5-185587 WID Intent driven management service for mobile network**

*Type: WID new For: Agreement  
 Source: Huawei*

(Replaces S5-185430)

**Decision:** The document was **revised to S5-185603**.

**S5-185603 WID Intent driven management service for mobile network**

*Type: WID new For: Agreement  
 Source: Huawei*

(Replaces S5-185587)

**Decision:** The document was **revised to S5-185610**.

**S5-185610 WID Intent driven management service for mobile network**

*Type: WID new For: Agreement  
 Source: Huawei*

(Replaces S5-185603)

**Decision:** The document was **agreed**.

**S5-185212 New WID on Enhancement of performance assurance**

*Type: WID new For: Agreement  
 Source: China Mobile, Intel Corporation (UK) Ltd*

**Discussion:**

Ericsson: scope of the WI is very wide

CMCC: analytical KPIs were already discussed in REL-15

Cisco: does not agree that analytical KPIs are described anywhere in a written form; we need to define where we do SON; please remove "assurance data", everything can be used for this

Huawei: objectives 2, 3, and 5 look similar to REL-15

Deutsche Telekom: procedures for performance evaluation? Seems to be a very wide field; also last objective unclear

Nokia: we should see a better justification for further thresholds; no real objectives here (REL-15 corrections do not need a new WI)

**Decision:** The document was **revised to S5-185431**.

**S5-185431 New WID on Enhancement of performance assurance**

*Type: WID new For: Agreement  
 Source: China Mobile, Intel Corporation (UK) Ltd*

(Replaces S5-185212)

**Decision:** The document was **revised to S5-185588**.

**S5-185588 New WID on Enhancement of performance assurance**

*Type: WID new For: Agreement  
 Source: China Mobile, Intel Corporation (UK) Ltd*

(Replaces S5-185431)

**Discussion:**

Cisco: can not agree with objectives

Nokia: measurements & KPIs or APIs/protocols?

**Decision:** The document was **revised to S5-185616**.

**S5-185616 New WID on Enhancement of performance assurance**

*Type: WID new For: Agreement  
 Source: China Mobile, Intel Corporation (UK) Ltd*

(Replaces S5-185588)

**Decision:** The document was **agreed**.

**S5-185213 New WID on OAM aspects of LTE and WLAN integration**

*Type: WID new For: Agreement  
 Source: Intel Corporation (UK) Ltd*

**Discussion:**

Ericsson: 38.868 should say 32.868;

Intel: LWA/LWIP are defined in RAN3 specs

Ericsson: any objects/attributes planned for them?

Nokia: is for LTE only and not for 5G?

Intel: correct

Nokia: acc. to 32.868 LWA is aggregation and LWIP is integration, this is not managed

**Decision:** The document was **revised to S5-185432**.

**S5-185432 New WID on OAM aspects of LTE and WLAN integration**

*Type: WID new For: Agreement  
 Source: Intel Corporation (UK) Ltd*

(Replaces S5-185213)

**Discussion:**

SA5 vice-chairman (Huawei): change BB to feature

**Decision:** The document was **revised to S5-185589**.

**S5-185589 New WID on OAM aspects of LTE and WLAN integration**

*Type: WID new For: Agreement  
 Source: Intel Corporation (UK) Ltd*

(Replaces S5-185432)

**Decision:** The document was **agreed**.

**S5-185255 New WID network policy management for mobile networks based on NFV scenarios**

*Type: WID new For: Agreement  
 Source: China Mobile (Suzhou) Software*

**Discussion:**

Ericsson: relation to our SI?

Nokia: objective focusses only on stage 3, where will be stage 1 and stage 2 work? a SI does not provide any normative work; Mano is not service based, 3GPP is (so far) not describing the consumer side so this will be a new area

Orange: referring to legacy TR which does not apply to 5G so objectives need to be rephrased a bit

SA5 vice-chairman (Huawei): we need a title for the TS; also check supporting companies

CMCC: Intel confirmed that they support

SA5 vice-chairman (Huawei): acc. to a former discussion with the SA chairman new WIs should be on feature level

SA5 chairman: please use latest WID template in the revision

**Decision:** The document was **revised to S5-185435**.

**S5-185435 New WID network policy management for mobile networks based on NFV scenarios**

*Type: WID new For: Agreement  
 Source: China Mobile (Suzhou) Software*

(Replaces S5-185255)

**Discussion:**

SA5 vice-chairman (Huawei): Huawei?

**Decision:** The document was **revised to S5-185590**.

**S5-185590 New WID network policy management for mobile networks based on NFV scenarios**

*Type: WID new For: Agreement  
 Source: China Mobile (Suzhou) Software*

(Replaces S5-185435)

**Decision:** The document was **agreed**.

**S5-185300 WID for service management**

*Type: WID new For: Agreement  
 Source: Ericsson Limited*

**Discussion:**

SA5 vice-chairman (Huawei): please use latest WID template

Nokia: expanding scope of SA5 to overlap with TMF? unclear what the framework is; SA5 the right place for stage 1 for service management?

Huawei: objectives not clear, starting with study phase?, reducing number of specs can be considered as we did for 5G

Intel: supports to reduce number of specs

Cisco: this is a feature and not a study but we will need to do some study

Orange: wondering about justification text "communication services to the customer"

**Decision:** The document was **revised to S5-185439**.

**S5-185439 SID for service management**

*Type: SID new For: Agreement  
 Source: Ericsson Limited*

(Replaces S5-185300)

**Discussion:**

Ericsson: changed from WID to SID; and some companies to be added

Orange: spec title to be updated

**Decision:** The document was **revised to S5-185617**.

**S5-185617 SID for service management**

*Type: SID new For: Agreement  
 Source: Ericsson Limited*

(Replaces S5-185439)

**Discussion:**

SA5 chairman: title is still saying WID

SA5 vice-chairman (Huawei): also title is not in line

**Decision:** The document was **revised to S5-185639**.

**S5-185639 SID for service management**

*Type: SID new For: Agreement  
 Source: Ericsson Limited*

(Replaces S5-185617)

**Decision:** The document was **agreed**.

**S5-185338 WID Methodology for 5G management specifications**

*Type: WID new For: Agreement  
 Source: Ericsson Limited*

**Discussion:**

SA5 vice-chairman (Huawei): coordination with SA3 not needed (copy-and-paste error)

Orange: is it possible to reduce the number of new TSs? We have already so many specs

Huawei: would support to consider 1 TS

Nokia: SOA is prior REL-15, confused what else you plan to do than template repertoire

Pivotal Commware: we are supporting this WI

**Decision:** The document was **revised to S5-185492**.

**S5-185492 WID Methodology for 5G management specifications**

*Type: WID new For: Agreement  
 Source: Ericsson Limited*

(Replaces S5-185338)

**Discussion:**

Ericsson: still has revision marks in it

SA5 vice-chairman (Huawei): spell out DT

Nokia: many "services", we are not defining interfaces

**Decision:** The document was **revised to S5-185591**.

**S5-185591 WID Methodology for 5G management specifications**

*Type: WID new For: Agreement  
 Source: Ericsson Limited*

(Replaces S5-185492)

**Decision:** The document was **agreed**.

**S5-185357 New SID on Self-Organizing Networks (SON) for 5G networks**

*Type: SID new For: Agreement  
 Source: Intel Korea, Ltd.*

**Discussion:**

Nokia: how is this proposal related to other proposals of this week? scope overlaps? justification about number of devices needed?

NEC: we should not restrict ourself to what we did on SON in REL-14 as automation industry is interested in this topic

Cisco: we are supporting this SI but agrees with NEC that new industry areas could be included, we should also address the services

ETRI: also supports that we need a SON WI

Pivotal Commware: supports this SI

Huawei: revisiting existing SON use cases or new use cases planned in this SI is unclear

Nokia: there is a benefit in having a WI that clarifies that it is on SON to indicate that we are not abandoning the industry on this topic

**Decision:** The document was **revised to S5-185493**.

**S5-185493 New SID on Self-Organizing Networks (SON) for 5G networks**

*Type: SID new For: Agreement  
 Source: Intel Korea, Ltd.*

(Replaces S5-185357)

**Discussion:**

Nokia: objectives: data produced by NWDAF will be considered? so far only management data is considered; separate bullet for SON and slicing is better; show split of responsibilities of rapporteurs;

SA5 vice-chairman (Huawei): the rapporteurs aspect is covered

**Decision:** The document was **revised to S5-185592**.

**S5-185592 New SID on Self-Organizing Networks (SON) for 5G networks**

*Type: SID new For: Agreement  
 Source: Intel Korea, Ltd.*

(Replaces S5-185493)

**Discussion:**

NEC: network and management data?

Intel: will add further supporters

**Decision:** The document was **revised to S5-185618**.

**S5-185618 New SID on Self-Organizing Networks (SON) for 5G networks**

*Type: SID new For: Agreement  
 Source: Intel Korea, Ltd.*

(Replaces S5-185592)

**Discussion:**

Intel: forgot a supporting company (Ericsson)

conclusion: revised during SA5 plenary

**Decision:** The document was **revised to S5-185642**.

**S5-185642 New SID on Self-Organizing Networks (SON) for 5G networks**

*Type: SID new For: Agreement  
 Source: Intel Korea, Ltd.*

(Replaces S5-185618)

**Decision:** The document was **agreed**.

**S5-185021 Minutes of New Work Item proposals - OAM&P**

*Type: report For: (not specified)  
 Source: WG Vice Chair (Orange)*

**Decision:** The document was **noted**.

### 6.3 OAM&P Maintenance and Rel-16 small Enhancements

**S5-185022 Minutes of OAM&P Maintenance and Rel-15 small Enhancements**

*Type: report For: (not specified)  
 Source: MCC*

**Decision:** The document was **noted**.

**S5-185139 CR 32.425 Add definition of UE active numbers related measurements**

*Type: CR For: Agreement  
 32.425 v15.1.0 CR-0171 Cat: B (Rel-15)  
  
 Source: Huawei, China Telecom*

**Discussion:**

see S5-185274 instead

**Decision:** The document was **withdrawn**.

**S5-185274 Rel-16 CR 32.425 Add definition of UE active numbers related measurements**

*Type: CR For: Agreement  
 32.425 v15.1.0 CR-0172 Cat: B (Rel-16)  
  
 Source: Huawei, China Telecom*

**Discussion:**

Ericsson: should be REL-15? title is wrong?

SA5 vice-chairman (Huawei): is cat.B so cannot be REL-15

Ericsson: where is 4.2.x calculation coming from?

Huawei: from RAN2, we sent LS to RAN2 in the past (LS was in 365)

Ericsson: for LTE or 5G?

Huawei: for LTE

Nokia: measurement cannot be handeled as 2 out of 3 case; if UL+DL are added you do not get total number as some have UL and DL and this has to be clarified

MCC: please look also at comments in S5-185010

**Decision:** The document was **revised to S5-185405**.

**S5-185405 Rel-16 CR 32.425 Add definition of UE active numbers related measurements**

*Type: CR For: Agreement  
 32.425 v15.1.0 CR-0172 rev 1 Cat: B (Rel-16)  
  
 Source: Huawei, China Telecom*

(Replaces S5-185274)

**Decision:** The document was **revised to S5-185593**.

**S5-185593 Rel-16 CR 32.425 Add definition of UE active numbers related measurements**

*Type: CR For: Agreement  
 32.425 v15.1.0 CR-0172 rev 2 Cat: B (Rel-16)  
  
 Source: Huawei, China Telecom*

(Replaces S5-185405)

**Decision:** The document was **agreed**.

**S5-185299 R15 CR 28658 Wrong terminology**

*Type: CR For: Agreement  
 28.658 v15.1.0 CR-0031 Cat: F (Rel-15)  
  
 Source: Ericsson Japan K.K.*

**Discussion:**

SA5 vice-chairman (Huawei): title could have been more explicit; is it an essential correction?

Ericsson: RAN2 asked us to correct

**Decision:** The document was **agreed**.

**S5-185324 R15 CR 28.701 Align terminology**

*Type: CR For: Agreement  
 28.701 v15.0.0 CR-0006 Cat: F (Rel-15)  
  
 Source: Ericsson Japan K.K.*

**Discussion:**

SA5 vice-chairman (Huawei): change is essential? wasn't such a CR rejected at last SA meeting?

SA5 chairman: no, this was not this CR

SA5 vice-chairman (Huawei): we can double-check and leave it open so far;

after checking:

SA5 vice-chairman (Huawei): CR rejected at last SA included 3G and NR issue, not sure anymore which one was considered problematic

SA5 chairman: have a stronger reason for change (generation would be wrong)

**Decision:** The document was **revised to S5-185595**.

**S5-185595 R15 CR 28.701 Align terminology**

*Type: CR For: Agreement  
 28.701 v15.0.0 CR-0006 rev 1 Cat: F (Rel-15)  
  
 Source: Ericsson Japan K.K.*

(Replaces S5-185324)

**Decision:** The document was **agreed**.

### 6.4 Rel-15 Operations, Administration, Maintenance and Provisioning (OAM&P)

#### 6.4.1 Management and orchestration of 5G networks and network slicing

**S5-185345 Sequence proposal for management and orchestration of 5G networks and network slicing agenda point 6.4.1**

*Type: discussion For: Information  
 Source: Ericsson Limited*

**Decision:** The document was **revised to S5-185427**.

**S5-185427 Sequence proposal for management and orchestration of 5G networks and network slicing agenda point 6.4.1**

*Type: discussion For: Information  
 Source: Ericsson Limited*

(Replaces S5-185345)

**Decision:** The document was **revised to S5-185447**.

**S5-185447 Sequence proposal for management and orchestration of 5G networks and network slicing agenda point 6.4.1**

*Type: discussion For: Information  
 Source: Ericsson Limited*

(Replaces S5-185427)

**Decision:** The document was **revised to S5-185489**.

**S5-185489 Sequence proposal for management and orchestration of 5G networks and network slicing agenda point 6.4.1**

*Type: discussion For: Information  
 Source: Ericsson Limited*

(Replaces S5-185447)

**Discussion:**

MCC: multiple versions of this Tdoc were published

**Decision:** The document was **revised to S5-185529**.

**S5-185529 Sequence proposal for management and orchestration of 5G networks and network slicing agenda point 6.4.1**

*Type: discussion For: Information  
 Source: Ericsson Limited*

(Replaces S5-185489)

**Decision:** The document was **noted**.

**Contribution to TS 28.533**

**S5-185118 pCR 28.533 Edit help - clarify status of Annex B**

*Type: pCR For: Approval  
 28.533 v0.5.1  
 Source: Ericsson Limited*

**Decision:** The document was **approved**.

**S5-185119 pCR 28.533 Edit help - insert new clause in section 4.3**

*Type: pCR For: Approval  
 28.533 v0.5.1  
 Source: Ericsson Limited*

**Decision:** The document was **approved**.

**S5-185120 pCR 28.533 Edit help - remove empty clauses**

*Type: pCR For: Approval  
 28.533 v0.5.1  
 Source: Ericsson Limited*

**Discussion:**

Ericsson: NEC Tdoc S5-185332 is adding some text under 4.4 which is removed by S5-185120

**Decision:** The document was **revised to S5-185407**.

**S5-185407 pCR 28.533 Edit help - remove empty clauses**

*Type: pCR For: Approval  
 28.533 v0.5.1  
 Source: Ericsson Limited*

(Replaces S5-185120)

**Decision:** The document was **approved**.

**S5-185332 pCR TS 28.533 Editorial changes to clause 4.2 and 4.4**

*Type: pCR For: Approval  
 28.533 v0.5.1  
 Source: NEC Corporation*

**Discussion:**

NEC: text is moved from 4.2 to 4.4

SA5 vice-chairman (Huawei): no revision marks in 4.4

**Decision:** The document was **revised to S5-185406**.

**S5-185406 pCR TS 28.533 Editorial changes to clause 4.2 and 4.4**

*Type: pCR For: Approval  
 28.533 v0.5.1  
 Source: NEC Corporation*

(Replaces S5-185332)

**Decision:** The document was **revised to S5-185442**.

**S5-185442 pCR TS 28.533 Editorial changes to clause 4.2 and 4.4**

*Type: pCR For: Approval  
 28.533 v0.5.1  
 Source: NEC Corporation*

(Replaces S5-185406)

**Decision:** The document was **approved**.

**S5-185330 pCR TS 28.533 Further clarification into clause 4.7 Management data analytics capability**

*Type: pCR For: Approval  
 28.533 v0.5.1  
 Source: NEC Corporation*

**Discussion:**

Huawei: S5-185149 is related to this

NEC: this Tdoc is already covering what S5-185149 includes

Nokia: figure shows deployments as functions, text not in line with figure

**Decision:** The document was **revised to S5-185408**.

**S5-185149 pCR 28.533 Update on MDAS**

*Type: pCR For: Approval  
 28.533 v0.5.1  
 Source: Huawei*

**Discussion:**

conclusion: merged into S5-185408

**Decision:** The document was **merged**.

**S5-185408 pCR TS 28.533 Further clarification into clause 4.7 Management data analytics capability**

*Type: pCR For: Approval  
 28.533 v0.5.1  
 Source: NEC Corporation, Huawei*

(Replaces S5-185330)

**Discussion:**

includes also aspects of S5-185149

**Decision:** The document was **approved**.

**S5-185121 pCR 28.533 Edit help - update references to include references from A.4**

*Type: pCR For: Approval  
 28.533 v0.5.1  
 Source: Ericsson Limited*

**Decision:** The document was **approved**.

**S5-185122 pCR 28.533 Resolution of Editors notes**

*Type: pCR For: Approval  
 28.533 v0.5.1  
 Source: Ericsson Limited*

**Discussion:**

NEC: existing spec text: A.1 minor typo in figure and text and fig. not aligned

Ericsson: can be fixed in another input

Nokia: title of A.4 needs to be adapted to the contents, it is utilization by the providers; "by the producers of" and "interfaces" and not "interface"

**Decision:** The document was **revised to S5-185409**.

**S5-185409 pCR 28.533 Resolution of Editors notes**

*Type: pCR For: Approval  
 28.533 v0.5.1  
 Source: Ericsson Limited*

(Replaces S5-185122)

**Decision:** The document was **approved**.

**S5-185123 pCR 28.533 Update list of abbreviations**

*Type: pCR For: Approval  
 28.533 v0.5.1  
 Source: Ericsson Limited*

**Discussion:**

SA5 vice-chairman (Huawei): version of the ETSI reference needed

Nokia: actually what we need are the definitions; we should not use terms (like CSMF) in the normative parts that are coming from outside

SA5 vice-chairman (Huawei): as we are late for this, we need to remove this later by CRs

Nokia: C is CSMF was for communication and not customer; abbreviations are only in the informative Annex, so we should not make them normative now by adding them in the abbreviations

SA5 vice-chairman (Huawei): offline discussion needed, we will come back to this

**Decision:** The document was **revised to S5-185445**.

**S5-185445 pCR 28.533 Update list of abbreviations**

*Type: pCR For: Approval  
 28.533 v0.5.1  
 Source: Ericsson Limited*

(Replaces S5-185123)

**Decision:** The document was **approved**.

**S5-185125 pCR TS 28.533 Normative architecture aspects**

*Type: pCR For: Approval  
 28.533 v0.5.0  
 Source: Cisco Systems Inc.*

**Discussion:**

Nokia: inconsistent handling of "functions" and "functional blocks"

**Decision:** The document was **revised to S5-185410**.

**S5-185410 pCR TS 28.533 Normative architecture aspects**

*Type: pCR For: Approval  
 28.533 v0.5.0  
 Source: Cisco Systems Inc., Deutsche Telekom*

(Replaces S5-185125)

**Decision:** The document was **approved**.

**S5-185303 pCR 28.533 Include management reference model**

*Type: pCR For: Approval  
 28.533 v0.5.1  
 Source: Ericsson Limited*

**Discussion:**

Huawei: 5.x fig. 5.x.2: used a different name for the function; some parts pre-5G: whether pre-5G was already following the principles need to be discussed

Cisco: a lot of information is encoded in figures and not covered in text, many lines connecting things but they are not interfaces like in reference model; why 4 pictures not 1?; so more text needed

Nokia: figures mix methodology: service based and legagy based; looks like figures were defined by an SA2 but not SA5 expert; one function contained in another function is confusing and needs further discussion; can not be included at the end of a REL as it needs further discussion

Intel: we need a diagram but agrees that proposed diagrams are too difficult to digest

NTT DOCOMO: let's make figures simple

Deutsche Telekom: we co-sourced the paper as we considered it more as a paper for discussion

Huawei: we never indicated that it is used externally, we have single instance handling so far, so this proposal goes beyond this

SA5 vice-chairman (Huawei): we have to send this spec for approval to SA at the end of this week; is there a chance to converge on all this?

Nokia: it is neither normative nor a framework, but you can use them as illustrations of complete or partial deployment examples in an informative annex

**Decision:** The document was **revised to S5-185411**.

**S5-185411 pCR 28.533 Include management reference model**

*Type: pCR For: Approval  
 28.533 v0.5.1  
 Source: Ericsson Limited*

(Replaces S5-185303)

**Decision:** The document was **revised to S5-185601**.

**S5-185601 pCR 28.533 Include management reference model**

*Type: pCR For: Approval  
 28.533 v0.5.1  
 Source: Ericsson Limited*

(Replaces S5-185411)

**Decision:** The document was **approved**.

**S5-185150 pCR 28.533 Exposure governance and EGMF further clarification**

*Type: pCR For: Approval  
 28.533 v0.5.1  
 Source: Huawei*

**Discussion:**

Nokia: "management instance component" unclear; serious concern about 2nd bullet (we usally do not touch policies in SA5, you may run into the problem that you have to describe the policy)

Deutsche Telekom: governance should be explained

**Decision:** The document was **revised to S5-185412**.

**S5-185412 pCR 28.533 Exposure governance and EGMF further clarification**

*Type: pCR For: Approval  
 28.533 v0.5.1  
 Source: Huawei*

(Replaces S5-185150)

**Decision:** The document was **approved**.

**S5-185151 pCR 28.533 Update of utilization of management services in functional management architecture**

*Type: pCR For: Approval  
 28.533 v0.5.1  
 Source: Huawei*

**Discussion:**

NTT DOCOMO: prefers to keep original figure to keep it simple

Nokia: original figure was ok; concerned about dotted box in the new figure; comments about in-scope or out-of-scope is not needed; see this figure rather an interpretation

Deutsche Telekom: we must indicate that the figure is an option, otherwise we will object to it

SA5 vice-chair (Huawei): seems new figure has problems

Nokia: additional figure would be less problematic than replacing existing one

**Decision:** The document was **revised to S5-185413**.

**S5-185413 pCR 28.533 Update of utilization of management services in functional management architecture**

*Type: pCR For: Approval  
 28.533 v0.5.1  
 Source: Huawei*

(Replaces S5-185151)

**Decision:** The document was **approved**.

**S5-185152 pCR 28 533 Registration and discovery of management service instances**

*Type: pCR For: Approval  
 28.533 v0.5.1  
 Source: Huawei*

**Discussion:**

Huawei: concept is based on measurement capability, entity is producer and consumer

Nokia: what exactly is discovery here, some unclear aspects, 28.533 is a high level spec, it is like having requirements without solution; doing this at the last meeting of REL-15 is probably not possible and doing it in REL-16 would be more realistic

Cisco: use cases and requirements are missing, so doing it in REL-16 would be better; better to start from a problem statement

Deutsche Telekom: splitting the proposal into 2 would be better

SA5 vice-chairman (Huawei): including a requirement without a solution at the last meeting of REL-15 is not possible

Nokia: if we find out later that REL-15 is not working without this, we can still bring a REL-15 correction

Huawei: maybe we could say it could be considered for REL-16?

Nokia: as long as it is clear that this is not an endorsement of a WI for REL-16

conclusion: no consensus to include this in REL-15, can be considered for REL-16 (this is no endorsement of a REL-16 work/WI)

**Decision:** The document was **not pursued**.

**S5-185153 pCR 28.533 Utilization of management service registration and discovery**

*Type: pCR For: Approval  
 28.533 v0.5.1  
 Source: Huawei*

**Discussion:**

Huawei: this Tdoc is a deployment example/use case for S5-185152

Nokia: text is a bit confusing if this is a use case

**Decision:** The document was **not pursued**.

**S5-185302 pCR 28.533 Update type C definition to include CM**

*Type: pCR For: Approval  
 28.533 v0.5.1  
 Source: Ericsson Limited*

**Discussion:**

Nokia: 2nd revision mark is conceptually wrong

Ericsson: but editor's can be removed

**Decision:** The document was **revised to S5-185486**.

**S5-185486 pCR 28.533 Update type C definition to include CM**

*Type: pCR For: Approval  
 28.533 v0.5.1  
 Source: Ericsson Limited*

(Replaces S5-185302)

**Decision:** The document was **approved**.

**S5-185124 pCR 28.533 Update style of code for Figure 4.6.2**

*Type: pCR For: Approval  
 28.533 v0.5.1  
 Source: Ericsson Limited*

**Decision:** The document was **revised to S5-185487**.

**S5-185487 pCR 28.533 Update style of code for Figure 4.6.2**

*Type: pCR For: Approval  
 28.533 v0.5.1  
 Source: Ericsson Limited*

(Replaces S5-185124)

**Decision:** The document was **approved**.

**S5-185117 Presentation of TS 28.533 to SA for approval**

*Type: TS or TR cover For: Approval  
 28.533 v0.5.1  
 Source: Ericsson Limited*

**Discussion:**

Orange: should be for Information and approval

Intel: there is no name in the tite

**Decision:** The document was **revised to S5-185621**.

**S5-185621 Presentation of TS 28.533 to SA for information and approval**

*Type: TS or TR cover For: Approval  
 28.533 v0.5.1  
 Source: Ericsson Limited*

(Replaces S5-185117)

**Decision:** The document was **approved**.

**Contribution to TS 28.530**

**S5-185147 pCR 28.530 Clean-up proposal**

*Type: pCR For: Approval  
 28.530 v1.2.2  
 Source: Huawei*

**Decision:** The document was **revised to S5-185488**.

**S5-185488 pCR 28.530 Clean-up proposal**

*Type: pCR For: Approval  
 28.530 v1.2.2  
 Source: Huawei, NEC*

(Replaces S5-185147)

**Discussion:**

including also changes from S5-185329

**Decision:** The document was **approved**.

**S5-185301 pCR 28.530 Add migration use case and requirement**

*Type: pCR For: Approval  
 28.530 v1.2.2  
 Source: Ericsson Limited*

**Discussion:**

NEC: is it mandated that 5G management system has to manage legacy system as well?

Nokia: yes, this is the text of the first requirement

NEC: not sure that this is appropriate

Nokia: can not agree on the use case, text is saying my management system is not service based (so all REL-15 efforts for nothing)

**Decision:** The document was **not pursued**.

**S5-185329 pCR TS 28.530 Further clarification into clause 4.9 Management data analytics for 5G networks and networks with slicing**

*Type: pCR For: Approval  
 28.530 v1.2.2  
 Source: NEC Corporation*

**Discussion:**

Nokia: what does "optimum network performance and service assurance" mean exactly?; further printing errors

Huawei: needs to be merged with S5-185488

conclusion: merged into S5-185488

**Decision:** The document was **merged**.

**S5-185154 Presentation sheet for 28.530**

*Type: TS or TR cover For: Approval  
 28.530 v..  
 Source: Huawei*

**Discussion:**

Nokia: renaming of the TSs needs to be taken into account (see S5-185524)

**Decision:** The document was **revised to S5-185525**.

**S5-185525 Presentation sheet for 28.530**

*Type: TS or TR cover For: Approval  
 28.530 v..  
 Source: Huawei*

(Replaces S5-185154)

**Discussion:**

will be sent for approval to SA #81

**Decision:** The document was **approved**.

**Contribution to TS 28.xyz (note: It was decided by SA5 #120 to use TS 28.532 for this.)**

**S5-185127 pCR TS 28.xyz createMOI clarification**

*Type: pCR For: Approval  
 28.532 v0.5.0  
 Source: Cisco Systems Inc.*

**Discussion:**

Ericsson: why removing "else" from bullet 1? wants to check further; finally ok

**Decision:** The document was **approved**.

**S5-185128 pCR TS 28.xyz modifyMOI clarification**

*Type: pCR For: Approval  
 28.532 v0.5.0  
 Source: Cisco Systems Inc.*

**Discussion:**

Nokia: don't want to align the output parameters to the text

Cisco: but then you will need a cause; change would be more significant

SA5 vice-chairman (Huawei): we can still fix this by CRs later

Nokia: error reasons can always be added

SA5 vice-chairman (Huawei): we need a global approach

Nokia: in solution sets we will have it so this pCR would not solve the inconsistency, so objects to approve this pCR

**Decision:** The document was **not pursued**.

**S5-185140 pCR 28.xyz Add notifications for provisioning management service**

*Type: pCR For: Approval  
 28.532 v0.5.0  
 Source: Huawei*

**Discussion:**

Cisco: currently it is operation; semantics remain unclear

Ericsson: reference for event time is missing

**Decision:** The document was **revised to S5-185526**.

**S5-185526 pCR 28.xyz Add notifications for provisioning management service**

*Type: pCR For: Approval  
 28.532 v0.5.0  
 Source: Huawei*

(Replaces S5-185140)

**Discussion:**

SA5 vice-chairman (Huawei): external reference should have a version

**Decision:** The document was **revised to S5-185596**.

**S5-185596 pCR 28.xyz Add notifications for provisioning management service**

*Type: pCR For: Approval  
 28.532 v0.5.0  
 Source: Huawei*

(Replaces S5-185526)

**Discussion:**

Ericsson: ITU-T reference?

SA5 vice-chairman (Huawei): 92 is the version

Nokia: objects as we do not know what it is about

**Decision:** The document was **not pursued**.

**S5-185141 pCR 28.xyz Add common subscribe management service**

*Type: pCR For: Approval  
 28.532 v0.5.0  
 Source: Huawei*

**Discussion:**

Nokia: is an inconsistent copy and paste of what we have; add or omit suspend/resume ?

SA5 vice-chairman (Huawei): you can decide this offline

**Decision:** The document was **revised to S5-185527**.

**S5-185527 pCR 28.xyz Add common subscribe management service**

*Type: pCR For: Approval  
 28.532 v0.5.0  
 Source: Huawei*

(Replaces S5-185141)

**Decision:** The document was **approved**.

**S5-185142 pCR 28.xyz Add specification level requirements for provisioning**

*Type: pCR For: Approval  
 28.532 v0.5.0  
 Source: Huawei*

**Discussion:**

Cisco: we can have either provisioning service or NSSI; our terminology is not enough to define generic requirements

**Decision:** The document was **revised to S5-185528**.

**S5-185528 pCR 28.xyz Add specification level requirements for provisioning**

*Type: pCR For: Approval  
 28.532 v0.5.0  
 Source: Huawei*

(Replaces S5-185142)

**Decision:** The document was **approved**.

**S5-185143 pCR 28.xyz Add specification level requirements for fault supervision**

*Type: pCR For: Approval  
 28.532 v0.5.0  
 Source: Huawei*

**Discussion:**

ZTE: requirement is not needed

Ericsson: should be "an authorized" in multiple places

**Decision:** The document was **not pursued**.

**S5-185144 pCR 28.xyz Add specification level requirements for performance assurance**

*Type: pCR For: Approval  
 28.532 v0.5.0  
 Source: Huawei*

**Discussion:**

Huawei: wants to keep this open for further discussion

**Decision:** The document was **not pursued**.

**S5-185145 pCR 28.xyz Add RESTful HTTP-based solution set of notifyprovisioning**

*Type: pCR For: Approval  
 28.532 v0.5.0  
 Source: Huawei*

**Discussion:**

Ericsson: ITU-T reference is missing, applies to all tables

**Decision:** The document was **revised to S5-185535**.

**S5-185535 pCR 28.xyz Add RESTful HTTP-based solution set of notifyprovisioning**

*Type: pCR For: Approval  
 28.532 v0.5.0  
 Source: Huawei*

(Replaces S5-185145)

**Decision:** The document was **approved**.

**S5-185146 pCR 28.xyz Update Restful HTTP-based solution set of provisioning**

*Type: pCR For: Approval  
 28.532 v0.5.0  
 Source: Huawei*

**Decision:** The document was **agreed**.

**S5-185171 pCR 28 xyz Add OpenAPI specification for Fault Supervision**

*Type: pCR For: Approval  
 28.532 v0.5.0  
 Source: Huawei*

**Abstract:**

moved from AI 6.4.4 to AI 6.4.1

**Discussion:**

ZTE: no stage 1 for this operation; we may need to merge this pCR with others (S5-185308 and maybe others of 6.4.1)

MCC: this pCR is about which spec?

Nokia: 28.532

Nokia: there was an old approved Nokia pCR which was not included in the new 28.xyz that was generated in the phone call and this Nokia pCR is now resubmitted now as Huawei Tdoc

conclusion: will be merged into S5-185446

**Decision:** The document was **merged**.

**S5-185308 pCR 28.xyz Add stage 3 content for fault supervision**

*Type: pCR For: Approval  
 28.532 v0.5.0  
 Source: Nokia Germany*

**Abstract:**

moved from AI 6.4.4 to AI 6.4.1

**Discussion:**

ZTE: still editor's notes under 9.1

Nokia: we have something in stage 3 that is not covered in stage 2

ZTE: China Mobile has a related Tdoc in AI 6.4.1

**Decision:** The document was **revised to S5-185446**.

**S5-185446 pCR 28.xyz Add stage 3 content for fault supervision**

*Type: pCR For: Approval  
 28.532 v0.5.0  
 Source: Nokia Germany, China Mobile, ZTE, Huawei*

(Replaces S5-185308)

**Discussion:**

will include aspects of S5-185171, S5-185232, S5-185233, S5-185234, S5-185272, S5-185273, S5-185275, S5-185276

Originally it was intended to merge also S5-185236 into S5-185446 but then it was decided to keep them separate.

**Decision:** The document was **revised to S5-185602**.

**S5-185602 pCR 28.xyz Add stage 3 content for fault supervision**

*Type: pCR For: Approval  
 28.532 v0.5.0  
 Source: Nokia Germany, China Mobile, ZTE, Huawei*

(Replaces S5-185446)

**Decision:** The document was **approved**.

**S5-185265 pCR 28.xyz Remove Operation getAlarmCount and Operation setComment**

*Type: pCR For: Approval  
 28.532 v0.5.0  
 Source: China Mobile Com. Corporation*

**Discussion:**

Nokia: removing from the toolbox just because we do not use it here is not a good justification

SA5 vice-chairman (Huawei): reintroduction in stage 2: 3 companies; removing from stage 3 (like in S5-185265): 1 company; so we go for reintroduction in stage 2 (28.532); anyone who can do the reintroduction in stage 2 this week? noone, so we do an alignment CR (stage 2 to stage 3) at the next meeting

**Decision:** The document was **not pursued**.

**S5-185232 pCR 28.xyz Add RESTful Solution of notifyChangedAlarm notification**

*Type: pCR For: Approval  
 28.532 v0.5.0  
 Source: China Mobile Com. Corporation*

**Discussion:**

Nokia: is overlapping with S5-185308

conclusion: merged into S5-185446

**Decision:** The document was **merged**.

**S5-185233 pCR 28.xyz Add RESTful Solution of notifyClearedAlarm notification**

*Type: pCR For: Approval  
 28.532 v0.5.0  
 Source: China Mobile Com. Corporation*

**Discussion:**

conclusion: merged into S5-185446

**Decision:** The document was **merged**.

**S5-185234 pCR 28.xyz Add RESTful Solution of notifyNewAlarm notification**

*Type: pCR For: Approval  
 28.532 v0.5.0  
 Source: China Mobile Com. Corporation*

**Discussion:**

conclusion: merged into S5-185446

**Decision:** The document was **merged**.

**S5-185236 pCR 28.xyz Add RESTful HTTP-based solution set of common subscribe and unsubscribe**

*Type: pCR For: (not specified)  
 28.532 v0.5.0  
 Source: HuaWei Technologies Co., Ltd*

**Discussion:**

originally it was decided to merge this Tdoc in S5-185446 but later it was decided to keep the Tdoc separately

**Decision:** The document was **revised to S5-185563**.

**S5-185563 pCR 28.xyz Add RESTful HTTP-based solution set of common subscribe and unsubscribe**

*Type: pCR For: Approval  
 28.532 v0.5.0  
 Source: HuaWei Technologies Co., Ltd*

(Replaces S5-185236)

**Discussion:**

Ericsson: 3GPP styles should be used, sometimes text in tables is aligned to the middle

Nokia: there is no "list of sequence" as a type in Jason

SA5 vice-chairman (Huawei): how do we solve it?

Nokia: action item for rapporteur to change it? what is the correct replacement?

Nokia: string for filter language

Nokia: we took CT template but in any case we will need a later cleanup CR, at first we should update the template

conclusion: rapporteur will replace "list of sequence" by "filter-QueryType" for filters when implementing all pCRs; it will be updated here to have a reference

**Decision:** The document was **revised to S5-185597**.

**S5-185597 pCR 28.xyz Add RESTful HTTP-based solution set of common subscribe and unsubscribe**

*Type: pCR For: Approval  
 28.532 v0.5.0  
 Source: HuaWei Technologies Co., Ltd*

(Replaces S5-185563)

**Decision:** The document was **approved**.

**S5-185272 pCR 28.xyz Add RESTful Solution of unsubscribe operation**

*Type: pCR For: Approval  
 28.532 v0.5.0  
 Source: ZTE, China Mobile*

**Discussion:**

conclusion: merged into S5-185446

**Decision:** The document was **merged**.

**S5-185273 pCR 28.xyz Add RESTful Solution of notifications**

*Type: pCR For: Approval  
 28.532 v0.5.0  
 Source: ZTE, China Mobile*

**Discussion:**

conclusion: merged into S5-185446

**Decision:** The document was **merged**.

**S5-185275 pCR 28.xyz Complete the openApi definition of alarminformation**

*Type: pCR For: Approval  
 28.532 v0.5.0  
 Source: ZTE, China Mobile*

**Discussion:**

conclusion: merged into S5-185446

**Decision:** The document was **merged**.

**S5-185276 pCR 28.xyz Add openApi definition of notifications and subscribe**

*Type: pCR For: Approval  
 28.532 v0.5.0  
 Source: ZTE, China Mobile*

**Discussion:**

conclusion: merged into S5-185446

**Decision:** The document was **merged**.

**S5-185211 Proposal for titles of 5G management specifications**

*Type: other For: Endorsement  
 Source: Intel Corporation (UK) Ltd*

**Discussion:**

SA5 vice-chairman (Huawei): difference to S5-184365 endorsed in the telco?

Huawei: "of 5G networks"

**Decision:** The document was **noted**.

**S5-185509 5G management specification titles**

*Type: discussion For: Approval  
 Source: SA5 OAM SWG chairman (Huawei)*

**Discussion:**

Huawei: this reflects the latest status

SA5 vice-chairman (Huawei): WIDs and TS titles need to be updated accordingly

Nokia: we do not need "5G networks" in the title

ZTE: 28.532 title should be discussed further

**Decision:** The document was **revised to S5-185524**.

**S5-185524 5G management specification titles**

*Type: discussion For: Approval  
 Source: SA5 OAM SWG chairman (Huawei)*

(Replaces S5-185509)

**Discussion:**

SA5 vice-chairman (Huawei): please align the spec names in WIDs, TS/TR covers and TRs/TSs with these spec titles

**Decision:** The document was **endorsed**.

**S5-185078 Revised WID Management and orchestration of 5G networks and network slicing Rev marks**

*Type: WID revised For: Agreement  
 Source: Ericsson Limited*

**Discussion:**

SA5 vice-chairman (Orange): say pre-5G instead of 2G, 3G, 4G; network slicing was not in pre-5G

NTT DOCOMO: also first change in justification needs to be updated again

MCC: 28.xxx should be 28.532

**Decision:** The document was **revised to S5-185539**.

**S5-185539 Revised WID Management and orchestration of 5G networks and network slicing Rev marks**

*Type: WID revised For: Agreement  
 Source: Ericsson Limited*

(Replaces S5-185078)

**Decision:** The document was **agreed**.

**S5-185155 Presentation sheet for 28.532**

*Type: TS or TR cover For: Approval  
 28.532 v..  
 Source: Huawei*

**Decision:** The document was **approved**.

**S5-185361 pCR 28.xyz Change AlarmIRP to FaultSupervisionFunction**

*Type: pCR For: Approval  
 28.532 v0.5.0  
 Source: ZTE Corporation*

**Decision:** The document was **revised to S5-185536**.

**S5-185536 pCR 28.xyz Change AlarmIRP to FaultSupervisionFunction**

*Type: pCR For: Approval  
 28.532 v0.5.0  
 Source: ZTE Corporation*

(Replaces S5-185361)

**Discussion:**

Nokia: wonders whether function is the right word here, we should talk about services instead

Huawei: we can still try to fix it next time with a REL-15 CR

Nokia: we should not have a REL-16 note; suggests to remove note, approve pCR and we can still do corrections next time

conclusion: only note under 6 will be removed

**Decision:** The document was **revised to S5-185598**.

**S5-185598 pCR 28.xyz Change AlarmIRP to FaultSupervisionFunction**

*Type: pCR For: Approval  
 28.532 v0.5.0  
 Source: ZTE Corporation*

(Replaces S5-185536)

**Decision:** The document was **approved**.

**S5-185362 pCR TS 28.xyz replace notificationIRP with notificationFunction**

*Type: pCR For: Approval  
 28.532 v0.5.0  
 Source: ZTE Corporation*

**Discussion:**

Nokia: "interface IRP" (we had multiple) is now called management service

Huawei: agrees we should not do the function

**Decision:** The document was **revised to S5-185538**.

**S5-185538 pCR TS 28.xyz replace notificationIRP with notificationFunction**

*Type: pCR For: Approval  
 28.532 v0.5.0  
 Source: ZTE Corporation*

(Replaces S5-185362)

**Discussion:**

Nokia: title is not appropriate

**Decision:** The document was **approved**.

**S5-185401 Reply LS to S5-184272 on Further Information About IETF Work Relevant to Network Slicing (IETF\_LS\_180814; to: SA5; cc: -; contact: IETF L2SM WG chairman)**

*Type: LS in For: discussion  
 Original outgoing LS: IETF\_LS\_180814, to SA5, cc -  
 Source: IETF*

**Decision:** The document was **postponed**.

**S5-185582 TS 28.532 v0.5.0**

*Type: draft TS For: Agreement  
 28.532 v0.5.0  
 Source: Huawei*

**Abstract:**

<div>based on endorsed version of conference call of 25.07.2018, is basis for all pCRs approved at SA5 #120 to 28.532</div>

**Decision:** The document was **agreed**.

**S5-185023 Minutes of Management and orchestration of 5G networks and network slicing**

*Type: report For: (not specified)  
 Source: Rapporteur (Ericsson)*

**Discussion:**

SA5 vice-chairman (Huawei): let's agree to 100%; email agreement of 28.530 (Huawei), 28.532 (Huawei), 28.533 (Ericsson) versions capturing agreements of SA5 #120; TSs will be for approval at SA

**Decision:** The document was **noted**.

**S5-185622 TS 28.530 v1.3.0**

*Type: draft TS For: Agreement  
 28.530 v1.3.0  
 Source: Huawei*

**Decision:** The document was **approved**.

**S5-185623 TS 28.532 v0.6.0**

*Type: draft TS For: Agreement  
 28.532 v0.6.0  
 Source: Huawei*

**Decision:** The document was **approved**.

**S5-185624 TS 28.533 v0.6.0**

*Type: draft TS For: Agreement  
 28.533 v0.6.0  
 Source: Ericsson*

**Decision:** The document was **approved**.

#### 6.4.2 Provisioning of 5G networks and network slicing

**S5-185267 Tdocs discussion sequence for agenda item 6.4.2**

*Type: discussion For: Information  
 28.531 v..  
 Source: Huawei*

**Decision:** The document was **noted**.

**S5-185161 Revised WID Provisioning of 5G networks and network slicing**

*Type: WID revised For: Agreement  
 Source: Huawei*

**Discussion:**

Tdoc was originally agreed but then revised to align TS titles with S5-185524

**Decision:** The document was **revised to S5-185564**.

**S5-185156 pCR 28.531 Rapporteur clean-up proposal**

*Type: pCR For: Approval  
 28.531 v1.2.2  
 Source: Huawei*

**Discussion:**

Cisco: table 6.2-1: one or four services?

Huawei: only one management service is intended

Cisco: each table is for single service

**Decision:** The document was **revised to S5-185415**.

**S5-185564 Revised WID Provisioning of 5G networks and network slicing**

*Type: WID revised For: Agreement  
 Source: Huawei*

(Replaces S5-185161)

**Decision:** The document was **agreed**.

**S5-185415 pCR 28.531 Rapporteur clean-up proposal**

*Type: pCR For: Approval  
 28.531 v1.2.2  
 Source: Huawei*

(Replaces S5-185156)

**Decision:** The document was **approved**.

**S5-185157 pCR 28.531 Clean-up proposal for editor's notes**

*Type: pCR For: Approval  
 28.531 v1.2.2  
 Source: Huawei*

**Discussion:**

Cisco: 5.1.1 NSSMF can hold TM manager

SA5 vice-chairman (Huawei): have some offline discussion and we will come back to this Tdoc later

**Decision:** The document was **approved**.

**S5-185158 pCR 28.531 Clean-up for procedures**

*Type: pCR For: Approval  
 28.531 v1.2.2  
 Source: Huawei*

**Decision:** The document was **approved**.

**S5-185104 pCR 28.531 Update UC/Requirement/Procedure for creation of a 3GPP NF**

*Type: pCR For: Approval  
 28.531 v1.2.2  
 Source: DOCOMO Communications Lab.*

**Discussion:**

Cisco: NF creating itself? change creation into provisioning

**Decision:** The document was **revised to S5-185416**.

**S5-185416 pCR 28.531 Update UC/Requirement/Procedure for creation of a 3GPP NF**

*Type: pCR For: Approval  
 28.531 v1.2.2  
 Source: DOCOMO Communications Lab.*

(Replaces S5-185104)

**Decision:** The document was **approved**.

**S5-185105 pCR 28.531 Update NSSI termination uc with considering shared NSSIs**

*Type: pCR For: Approval  
 28.531 v1.2.2  
 Source: China Unicom*

**Abstract:**

This proposal updates the NSSI termination use case based on TS 28.530 NSI decommissioning process and consider especially for the shared NSSI.

**Discussion:**

Ericsson: 2nd revision is a new requirement

**Decision:** The document was **revised to S5-185417**.

**S5-185417 pCR 28.531 Update NSSI termination uc with considering shared NSSIs**

*Type: pCR For: Approval  
 28.531 v1.2.2  
 Source: China Unicom*

(Replaces S5-185105)

**Decision:** The document was **approved**.

**S5-185160 pCR 28.531 Add procedures for communictions services using 5G network**

*Type: pCR For: Approval  
 28.531 v1.2.2  
 Source: Huawei*

**Discussion:**

Nokia: orthogonal whether slice is involved, you will always use existing network; instead of a slice a temporary network can be deployed

Cisco: figure confusing (NOP, CSP do not send messages to each other) and also "agreement" needs to be rephrased

**Decision:** The document was **revised to S5-185418**.

**S5-185418 pCR 28.531 Add procedures for communictions services using 5G network**

*Type: pCR For: Approval  
 28.531 v1.2.2  
 Source: Huawei*

(Replaces S5-185160)

**Decision:** The document was **approved**.

**S5-185126 pCR TS 28.531 Alignment between clauses 5, 7 and 6**

*Type: pCR For: Approval  
 28.531 v1.2.1  
 Source: Cisco Systems Inc.*

**Discussion:**

Nokia: supports intention of the Tdoc, but changing "provisioning" to "management" is not a good wording (see 5.2.1)

Huawei: next 2 Tdocs (S5-185335, S5-185343) may fulfill your observations already

**Decision:** The document was **not pursued**.

**S5-185335 pCR 28.531 add the related operation in procedures**

*Type: pCR For: Approval  
 28.531 v1.2.2  
 Source: HuaWei Technologies Co., Ltd*

**Discussion:**

Cisco: is not really a solution to the problem

**Decision:** The document was **revised to S5-185448**.

**S5-185448 pCR 28.531 add the related operation in procedures**

*Type: pCR For: Approval  
 28.531 v1.2.2  
 Source: HuaWei Technologies Co., Ltd*

(Replaces S5-185335)

**Decision:** The document was **approved**.

**S5-185343 pCR 28.531 Add operations for provisioning management service**

*Type: pCR For: Approval  
 28.531 v1.2.2  
 Source: Huawei*

**Discussion:**

SA5 vice-chairman (Huawei): offline discussion of S5-185126, S5-185335, S5-185343

**Decision:** The document was **revised to S5-185433**.

**S5-185433 pCR 28.531 Add operations for provisioning management service**

*Type: pCR For: Approval  
 28.531 v1.2.2  
 Source: Huawei*

(Replaces S5-185343)

**Decision:** The document was **approved**.

**S5-185131 Revise the procedure of network slice capacity planning**

*Type: pCR For: Approval  
 28.531 v1.2.1  
 Source: ETRI*

**Abstract:**

This pCR proposes to revise the procedure of network slice capacity planning.

**Decision:** The document was **approved**.

**S5-185254 Discussion on network slice priority**

*Type: discussion For: Endorsement  
 Source: China Telecom Corporation Ltd.*

**Abstract:**

This is a discussion paper about the importance of network slice priority and it is hope that there will be more detailed solution about it. This contribution is relevant to 28541 and 28531.

**Discussion:**

proposals:

1) Add network slice priority management to related specifications, including how priority is managed and priority identification/indicator.

2) pCR TS 28.541 Add network slice priority in Information Model definitions for network slice.

2) pCR TS 28.531 Add network slice priority in Procedure of Network Slice Instance Allocation.

Ericsson: looking for a standards based solution?

Nokia: it should not be slice priority; addressing the problem is important but the pCRs are not acceptable; so we need to discuss how to address properly

SA5 vice-chairman (Huawei): offline discussion until Wed morning

**Decision:** The document was **revised to S5-185428**.

**S5-185428 Discussion on network slice priority**

*Type: discussion For: Endorsement  
 Source: China Telecom Corporation Ltd.*

(Replaces S5-185254)

**Discussion:**

Cisco: one of our comments was not addressed: no explanation what are the resources to be reallocated

Orange: priority of different instances of the same slice or different types of slices?

China Telecom: instances of the same slice

Nokia: original proposal was too restrictive, not providing a complete solution; current proposal is more open and is targeting REL-16 which is acceptable for us

Deutsche Telekom: 2nd sentence is too restrictive to reallocating

**Decision:** The document was **revised to S5-185494**.

**S5-185494 Discussion on network slice priority**

*Type: discussion For: Endorsement  
 Source: China Telecom Corporation Ltd.*

(Replaces S5-185428)

**Discussion:**

proposal:

to address this topic (network slice priority) in 3GPP Rel-16 (with an option to back port the agreements to Rel-15 via CR process to avoid causing the delay in publication or SA5 specifications) and welcome relevant contributions.

Cisco: problem statement is missing (problem is clear) and solution is unclear

Nokia: the actual proposal seems to be ok

SA5 vice-chairman (Huawei): discuss offline and we will come back

**Decision:** The document was **revised to S5-185607**.

**S5-185607 Discussion on network slice priority**

*Type: discussion For: Endorsement  
 Source: China Telecom Corporation Ltd.*

(Replaces S5-185494)

**Discussion:**

Cisco: differentiation is the right term and not priority differentiation

SA5 vice-chairman (Huawei): we can discuss this further next time

**Decision:** The document was **noted**.

**S5-185263 pCR TS 28531 adding network slice priority in procedure of NSI allocation**

*Type: pCR For: Approval  
 28.531 v1.2.2  
 Source: China Telecom Corporation Ltd.*

**Discussion:**

Nokia: concern is that we add an unclear procedure to REL-15 and so we cannot agree to the pCR

Cisco: we need to clarify what a priority does, fears that such a clarification would be difficult

Ericsson: same views as Nokia and Cisco

SA5 chairman: it seems there is no consensus on the pCR

China Telecom: we will continue to progress on related S5-185494

**Decision:** The document was **not pursued**.

**S5-185159 pCR 28.531 Update Interface for provisioning of network and network slicing with notifications**

*Type: pCR For: Approval  
 28.531 v1.2.2  
 Source: Huawei*

**Discussion:**

Nokia: is confusing regarding notifications

Cisco: prefers to use "subscription"

Nokia: no, it is notification

Huawei: subscription is another operation, you need to subscribe to get notifications

Cisco: text is not clear

Nokia: agrees with Cisco that the text is not clear

**Decision:** The document was **revised to S5-185495**.

**S5-185495 pCR 28.531 Update Interface for provisioning of network and network slicing with notifications**

*Type: pCR For: Approval  
 28.531 v1.2.2  
 Source: Huawei*

(Replaces S5-185159)

**Decision:** The document was **approved**.

**S5-185148 pCR 28.531 NSD parameterization for NSSI allocation**

*Type: pCR For: Approval  
 28.531 v1.2.2  
 Source: Huawei*

**Discussion:**

Nokia: text change is unclear and in contrast to what the author presented (does not touch NSD)

**Decision:** The document was **revised to S5-185496**.

**S5-185496 pCR 28.531 NSD parameterization for NSSI allocation**

*Type: pCR For: Approval  
 28.531 v1.2.2  
 Source: Huawei*

(Replaces S5-185148)

**Decision:** The document was **approved**.

**S5-185344 pCR 28.531 Insert connection to definitions in 28.530**

*Type: pCR For: Approval  
 28.531 v1.2.2  
 Source: Ericsson Limited*

**Discussion:**

Nokia: definitions do not need to be repeated here; network slice template is discussed in GSMA but we have not yet agreed to use network slice subnet templates; usally definitions use capital letters

Huawei: same view as Nokia

**Decision:** The document was **revised to S5-185497**.

**S5-185497 pCR 28.531 Insert connection to definitions in 28.530**

*Type: pCR For: Approval  
 28.531 v1.2.2  
 Source: Ericsson Limited*

(Replaces S5-185344)

**Decision:** The document was **approved**.

**S5-185264 Presentation of TS 28.531 to SA for Approval**

*Type: TS or TR cover For: Approval  
 28.531 v..  
 Source: Huawei*

**Discussion:**

SA5 chairman: as TS title changed we have to make sure that this is aligned with the WID and that it will be updated by MCC in 3GU

Tdoc was originally approved but then revised to align TS titles with S5-185524

**Decision:** The document was **revised to S5-185565**.

**S5-185565 Presentation of TS 28.531 to SA for Approval**

*Type: TS or TR cover For: Approval  
 28.531 v..  
 Source: Huawei*

(Replaces S5-185264)

**Decision:** The document was **approved**.

**S5-185304 pCR 28.532 Update state handling of NSI**

*Type: pCR For: Approval  
 28.532 v0.5.0  
 Source: Ericsson Limited*

**Decision:** The document was **withdrawn**.

**S5-185305 pCR 28.532 State handling of NSSI**

*Type: pCR For: Approval  
 28.532 v0.5.0  
 Source: Ericsson Limited*

**Decision:** The document was **withdrawn**.

**S5-185024 Minutes of Provisioning of 5G networks and network slicing**

*Type: report For: (not specified)  
 Source: Rapporteur (Huawei)*

**Discussion:**

SA5 vice-chairman (Huawei): 100% seems to be ok; email agreement of TS 28.531 (Huawei) needed

**Decision:** The document was **noted**.

**S5-185625 TS 28.531 v1.3.0**

*Type: draft TS For: Agreement  
 28.531 v1.3.0  
 Source: Huawei*

**Decision:** The document was **approved**.

#### 6.4.3 Network Resource Model (NRM) for 5G networks and network slicing

**S5-185099 Proposal of TDoc discussion sequence for agenda item 4.2.3**

*Type: discussion For: Information  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **noted**.

**S5-185085 pCR TS 28.541 Add YANG-based SS definitions for gNB modeling**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S5-185358**.

**S5-185358 pCR TS 28.541 Add YANG-based SS definitions for gNB modeling**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S5-185085)

**Decision:** The document was **approved**.

**S5-185100 Revised WID Network Resource Model (NRM) for 5G networks and network slicing**

*Type: WID revised For: Agreement  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **agreed**.

**S5-185081 pCR TS 28.540 Add requirements for network slice modeling**

*Type: pCR For: Approval  
 28.540 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

Huawei: why "specific" in first sentence?

Nokia: can be removed

**Decision:** The document was **revised to S5-185419**.

**S5-185419 pCR TS 28.540 Add requirements for network slice modeling**

*Type: pCR For: Approval  
 28.540 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S5-185081)

**Decision:** The document was **approved**.

**S5-185162 pCR 28.540 Add concept and requirements for management of edge computing**

*Type: pCR For: Approval  
 28.540 v1.1.0  
 Source: Huawei*

**Discussion:**

Ericsson: "load reduction" missing

Nokia: no double negation please

**Decision:** The document was **approved**.

**S5-185297 pCR 28.540 Support mgmt of Beam-RLM and BFD monitoring & reporting in NRM definitions**

*Type: pCR For: Approval  
 28.540 v1.1.0  
 Source: Intel Korea, Ltd.*

**Discussion:**

Nokia: how will "beamforming failure detection" be supported in NRM? should be in fault management specification (supervision WI); new or existing object type?

Ericsson: to the reference: RAN groups have not yet finalized the spec

**Decision:** The document was **revised to S5-185420**.

**S5-185420 pCR 28.540 Support mgmt of Beam-RLM and BFD monitoring & reporting in NRM definitions**

*Type: pCR For: Approval  
 28.540 v1.1.0  
 Source: Intel Korea, Ltd.*

(Replaces S5-185297)

**Discussion:**

linked with S5-180500

Nokia: requirements focus on NRM definitions, remove "object and attributes"

Ericsson: this Tdoc is related to solutions, would prefer to have more time

conclusion: remove "object and attributes"

**Decision:** The document was **revised to S5-185599**.

**S5-185599 pCR 28.540 Support mgmt of Beam-RLM and BFD monitoring & reporting in NRM definitions**

*Type: pCR For: Approval  
 28.540 v1.1.0  
 Source: Intel Korea, Ltd.*

(Replaces S5-185420)

**Decision:** The document was **revised to S5-185619**.

**S5-185619 pCR 28.540 Support mgmt of Beam-RLM and BFD monitoring & reporting in NRM definitions**

*Type: pCR For: Approval  
 28.540 v1.1.0  
 Source: Intel Korea, Ltd.*

(Replaces S5-185599)

**Discussion:**

SA5 vice-chairman: any objection to approve S5-185619?

Ericsson: we object

**Decision:** The document was **not pursued**.

**S5-185326 pCR 28.540 Update list of abbreviations**

*Type: pCR For: Approval  
 28.540 v1.1.0  
 Source: Ericsson Japan K.K.*

**Decision:** The document was **approved**.

**S5-185097 Presentation of TS 28.540 for approval**

*Type: TS or TR cover For: Approval  
 28.540 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

Nokia: intention is to not go for a further exception but to go for approval of the TS

SA5 vice-chairman (Huawei): let's handle this on Fri in the closing OAM session; was provided for information before?; title needs to be corrected

**Decision:** The document was **revised to S5-185600**.

**S5-185600 Presentation of TS 28.540 for approval**

*Type: TS or TR cover For: Approval  
 28.540 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S5-185097)

**Decision:** The document was **approved**.

**S5-185061 pCR Rel-15 TS 28.541 add ME class in UML diagram**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Ericsson Inc.*

**Discussion:**

Huawei: unclear what "external" means here; could open S5-185062 which is related

**Decision:** The document was **revised to S5-185422**.

**S5-185422 pCR Rel-15 TS 28.541 add ME class in UML diagram**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Ericsson Inc.*

(Replaces S5-185061)

**Decision:** The document was **approved**.

**S5-185062 pCR Rel-15 28.541 use ExternalXyz class**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Ericsson Inc.*

**Discussion:**

Huawei: 4.3.23 title should be changed

Nokia: worried of confusion outside if we have already problems in SA5 to understand; proxy class for inheritants is problematic; proxy class used for different things in S5-185061 and S5-185062

**Decision:** The document was **revised to S5-185421**.

**S5-185421 pCR Rel-15 28.541 use ExternalXyz class**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Ericsson Inc.*

(Replaces S5-185062)

**Decision:** The document was **approved**.

**S5-185063 Rel-15 28.541 Remove colour in UML diagrams**

*Type: discussion For: Approval  
 28.541 v1.1.0  
 Source: Ericsson Inc.*

**Discussion:**

SA5 vice-chairman (Huawei): is actually rather discussion paper

Ericsson: is suggesting to remove the colours from the figures as the colours have no meaning

conclusion: TS rapporteur will remove the colours from the figures in next version of TS 28.541

**Decision:** The document was **endorsed**.

**S5-185080 pCR TS 28.541 clean-up**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Nokia Solutions & Networks (I)*

**Discussion:**

Ericsson: also has a pCR to remove editor's note(s) in S5-185064

SA5 vice-chairman (Huawei): so editor's note (point 5) ) will not be removed in S5-185080 but in S5-185064

Huawei: suggests to turn editor's note under 6) into a note

Nokia: this would be confusing

SA5 vice-chairman (Huawei): you can discuss this further and we will come back to S5-185080

**Decision:** The document was **revised to S5-185423**.

**S5-185423 pCR TS 28.541 clean-up**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Nokia Solutions & Networks (I)*

(Replaces S5-185080)

**Decision:** The document was **approved**.

**S5-185064 pCR Rel-15 28.541 on types for nGCI and gNBId v4**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Ericsson Inc.*

**Decision:** The document was **approved**.

**S5-185082 pCR TS 28.541 Add common notification definitions**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

Orange: wrong reference [26] in 5.5.A and 4.5 and 6.5

SA5 vice-chairman (Huawei): we will reuse 28.532 for 28.xyz; no objection to do this; we will see a revised WID under AI 6.4.1

**Decision:** The document was **revised to S5-185424**.

**S5-185424 pCR TS 28.541 Add common notification definitions**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S5-185082)

**Decision:** The document was **approved**.

**S5-185066 pCR Rel-15 TS 28541 import and not define pLMNIDList**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Ericsson Inc.*

**Decision:** The document was **approved**.

**S5-185164 pCR 28.541 Clean-up of EP\_RP IOC definition**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Huawei*

**Discussion:**

Ericsson: supports the change but not how the type is changed

Nokia: suggests to use the proper data types

**Decision:** The document was **revised to S5-185425**.

**S5-185425 pCR 28.541 Clean-up of EP\_RP IOC definition**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Huawei*

(Replaces S5-185164)

**Decision:** The document was **approved**.

**S5-185165 pCR 28.541 Address the consistency issue for TAC and NSSAI**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Huawei*

**Discussion:**

Intel: alphabetic order to be considered

SA5 vice-chairman (Huawei): it seems alphabetic is not consistently applied

Ericsson: table 4.3.5.2: 2 lines with mandatory, why?

SA5 vice-chairman (Huawei): is not part of the pCR but existing spec text

Ericsson: using character that is not allowed

**Decision:** The document was **revised to S5-185426**.

**S5-185426 pCR 28.541 Address the consistency issue for TAC and NSSAI**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Huawei*

(Replaces S5-185165)

**Decision:** The document was **approved**.

**S5-185060 TD Rel-15 28541 NR cell relation with node**

*Type: discussion For: Endorsement  
 28.541 v..  
 Source: Ericsson Inc.*

**Discussion:**

proposals:

A. Use a new attribute called UUID, for both NRCellDU class and NRCellCU class when a new instance of NRCellDU or NRCellCU is created. All NRCellDU and NRCellCU would have its own unique UUID attribute value.

B. When a cell is rehomed, the cell DN changes but its UUID remains unchanged.

C. The PM and FM reports would, in addition bearing the DN of the NRCellDU or NRCellCU, carries the UUID attribute value.

Nokia: first proposal cannot be agreed as it is written now

Nokia: this naming problem is existing already for a long time, any reason why you bring this up now when we struggle to complete REL-15?

Ericsson: there is no pCR for this and there is never a good time for it, we wanted to bring this up again

Nokia: is an alternative naming, wondering about alternative to what

Orange: what does UUID stands for

Ericsson: will come back to this topic at the next SA5 meeting when there is less load

**Decision:** The document was **noted**.

**S5-185065 pCR Rel-15 TS 28541 Cell BWP model fragment**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Ericsson Inc.*

**Decision:** The document was **revised to S5-185499**.

**S5-185499 pCR Rel-15 TS 28541 Cell BWP model fragment**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Ericsson Inc.*

(Replaces S5-185065)

**Decision:** The document was **approved**.

**S5-185167 pCR 28.541 Update NR NRM with Cell Relation**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Huawei*

**Discussion:**

Ericsson: suggests to postpone this pCR

Huawei: publishing NR NRM without cell relationship is not useful

Nokia: delaying the publication for 3 months would be worse

SA5 chairman: it seems Ericsson would not like to approve this pCR, so we give you time to discuss this further offline and come back

**Decision:** The document was **not pursued**.

**S5-185298 pCR 28.541 Add Info Model definitions for NRCellDU SpatialDomainFilter**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Pivotal Commware, Intel Korea, Ltd.*

**Discussion:**

Nokia: unclear what is intended here

Nokia: unclear why Intel signed the Tdoc; what is Intel's understanding of the requirement?

Intel: requirement has been changed

Nokia: attribute on a cell will not work; set and get values or also alarms?

Intel: no alarms, just set and get values

Nokia: then we have no problems how it is formulated

Huawei: special relationship information is missing in 38.213

Nokia: it seems you copied the same name twice

SA5 chairman: S is missing for Spatial

Pivotal Commware: should be for DL and UL

Orange: why attributes on the cell?

Nokia: entity to be manageable and to support alarms was intended 2 days before that's why we were wondering but this has obviously changed

Ericsson: if alarm, you need to identify the objects; different transmission points can have different settings

**Decision:** The document was **revised to S5-185500**.

**S5-185500 pCR 28.541 Add Info Model definitions for NRCellDU SpatialDomainFilter**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Pivotal Commware, Intel Korea, Ltd.*

(Replaces S5-185298)

**Discussion:**

Pivotal Commware: one proponent still wants to check further

**Decision:** The document was **postponed**.

**S5-185166 pCR 28.541 Update Network Slice Class diagram**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Huawei*

**Discussion:**

Ericsson: related to S5-185163?

Huawei: this one is only about the diagram

Ericsson: should be one-to-many relation

Nokia: relationship is one-to-one, actually one to zero to one (\* allows 2 or 3 or 4 or 5; we are not happy about this)

Ericsson: colour needs to be removed in figures, where is inheritance?

Nokia: strange that we debate the figure that was agreed in the past and not the actual pCR

**Decision:** The document was **revised to S5-185501**.

**S5-185501 pCR 28.541 Update Network Slice Class diagram**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Huawei*

(Replaces S5-185166)

**Decision:** The document was **approved**.

**S5-185163 pCR 28.541 Clean-up information model for network slice**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Huawei*

**Discussion:**

Nokia: any abbreviations already covered in 28.540?

SA5 chairman: 28.540 should be also mentioned in first sentence of 3.2

Ericsson: introducing more data types without defining

Nokia: Ericsson comment is on the existing TS text

**Decision:** The document was **revised to S5-185502**.

**S5-185502 pCR 28.541 Clean-up information model for network slice**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Huawei*

(Replaces S5-185163)

**Decision:** The document was **approved**.

**S5-185130 pCR TS 28.541 RRM Policy**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Cisco Systems Inc.*

**Discussion:**

Nokia: what happens if total is 120% or 300%?

Cisco: thought we can get above 100%

Nokia: we need some restriction

**Decision:** The document was **revised to S5-185503**.

**S5-185503 pCR TS 28.541 RRM Policy**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Cisco Systems Inc., Deutsche Telekom*

(Replaces S5-185130)

**Decision:** The document was **approved**.

**S5-185132 Add attributes for network slice capacity planning**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: ETRI*

**Abstract:**

This pCR proposes to add attributes in NRM for network slice capacity planning.

**Discussion:**

Nokia: very narrow use case

Cisco: it is needed to clarify what "capacity planning" really means here

**Decision:** The document was **revised to S5-185504**.

**S5-185504 Add attributes for network slice capacity planning**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: ETRI*

(Replaces S5-185132)

**Decision:** The document was **not pursued**.

**S5-185349 pCR 28.541 Update state handling of NSI**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Ericsson Limited*

**Discussion:**

Nokia: does not agree with diagram and transitions, you are mixing 2 concepts shutting down a state and admission control

**Decision:** The document was **revised to S5-185505**.

**S5-185505 pCR 28.541 Update state handling of NSI**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Ericsson Limited*

(Replaces S5-185349)

**Decision:** The document was **approved**.

**S5-185350 pCR 28.541 State handling of NSSI**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Ericsson Limited*

**Discussion:**

SA5 chairman: similar problem as S5-185349

Nokia: you mix the calls with the results, when in shutting down state you do not admit further users

**Decision:** The document was **revised to S5-185506**.

**S5-185506 pCR 28.541 State handling of NSSI**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Ericsson Limited*

(Replaces S5-185350)

**Decision:** The document was **approved**.

**S5-185266 pCR TS 28541 adding network slice priority in class definitions**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: China Telecom Corporation Ltd.*

**Abstract:**

related to S5-185263

**Discussion:**

China Telecom: is related to discussion Tdoc S5-185428 treated on Wed morning

Nokia: as mentioned on discussion paper, no chance to agree this pCR this week

Cisco: agrees

**Decision:** The document was **not pursued**.

**S5-185083 pCR TS 28.541 Update JSON-based NR NRM SS definitions to keep it aligned with IM definitions**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

Nokia: general question: if a Tdoc adds new content to stage 2, who will generate stage 3 content for this? and when?

SA5 chairman: stage 2 author should try to do it this week or by email; if this is not possible, then this would be a correction CR next time

**Decision:** The document was **approved**.

**S5-185084 pCR TS 28.541 Update XML-based NR NRM SS definitions to keep it aligned with IM definitions**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S5-185508**.

**S5-185508 pCR TS 28.541 Update XML-based NR NRM SS definitions to keep it aligned with IM definitions**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S5-185084)

**Decision:** The document was **approved**.

**S5-185086 pCR TS 28.541 Update JSON-based 5GC NRM SS definitions to keep it aligned with IM definitions**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **approved**.

**S5-185087 pCR TS 28.541 Update XML-based 5GC NRM SS definitions to keep it aligned with IM definitions**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S5-185364**.

**S5-185364 pCR TS 28.541 Update XML-based 5GC NRM SS definitions to keep it aligned with IM definitions**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S5-185087)

**Discussion:**

Ericsson: there are some agreed stage 2 changes that need to be covered as well

Nokia: if the stage 3 change is available and agreed, it could be included; but if stage 3 is not yet available, we should not block stage 2 from approval; it's not the rapporteur's job to automatically generate new stage 3 for whatever is agreed for stage 2

Ericsson: would a stage 3 CR for email discussion or for next meeting

Nokia: would rather define an action item for next meeting but if stage 2 proponent is proposing a stage 3 pCR an email approval would be ok for us as well

Ericsson: distinguishing references needs to be discussed somewhere

conclusion: OAM action item planned to align stage 3 with stage 2 for new additions agreed to stage 2 this week

**Decision:** The document was **revised to S5-185507**.

**S5-185507 pCR TS 28.541 Update XML-based 5GC NRM SS definitions to keep it aligned with IM definitions**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S5-185364)

**Discussion:**

SA5 vice-chairman (Huawei): wrong Tdoc number on the Tdoc

**Decision:** The document was **approved**.

**S5-185088 pCR TS 28.541 Add YANG-based SS definitions for 5GC modeling**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S5-185359**.

**S5-185359 pCR TS 28.541 Add YANG-based SS definitions for 5GC modeling**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S5-185088)

**Decision:** The document was **revised to S5-185490**.

**S5-185490 pCR TS 28.541 Add YANG-based SS definitions for 5GC modeling**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S5-185359)

**Discussion:**

Nokia: suggests that actions are submitted as discussion paper and not sent directly to the rapporteur

**Decision:** The document was **approved**.

**S5-185531 YANG model restructuring**

*Type: discussion For: Endorsement  
 Source: Ericsson*

**Discussion:**

conclusion: The 3 points will be added to OAM action list

**Decision:** The document was **noted**.

**S5-185089 pCR TS 28.541 Add JSON-based SS definitions for network slice modeling**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

Ericsson: where is the relation between slice subnet and network service?

SA5 vice-chairman (Orange): seems to be in line with stage 2

**Decision:** The document was **approved**.

**S5-185090 pCR TS 28.541 Add XML-based SS definitions for network slice modeling**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S5-185530**.

**S5-185530 pCR TS 28.541 Add XML-based SS definitions for network slice modeling**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S5-185090)

**Decision:** The document was **approved**.

**S5-185091 pCR TS 28.541 Add YANG-based SS definitions for network slice modeling**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S5-185360**.

**S5-185360 pCR TS 28.541 Add YANG-based SS definitions for network slice modeling**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S5-185091)

**Decision:** The document was **revised to S5-185491**.

**S5-185491 pCR TS 28.541 Add YANG-based SS definitions for network slice modeling**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S5-185360)

**Decision:** The document was **revised to S5-185532**.

**S5-185532 pCR TS 28.541 Add YANG-based SS definitions for network slice modeling**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S5-185491)

**Decision:** The document was **approved**.

**S5-185327 pCR 28.541 Update list of abbreviations**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Ericsson Japan K.K.*

**Discussion:**

Nokia: cannot agree on adding the abbreviation; 28.540 was supposed to be added to first sentence; concern on function abbreviations as we do not have them in normative text

SA5 vice-chairman (Orange): CSMF: C for communication

Huawei: how were abbreviations of informative text handled in the past?

SA5 vice-chairman (Orange), SA5 vice-chairman (Huawei): were added to abbreviations, there is no differentiation between normative and informative abbreviations

**Decision:** The document was **revised to S5-185533**.

**S5-185533 pCR 28.541 Update list of abbreviations**

*Type: pCR For: Approval  
 28.541 v1.1.0  
 Source: Ericsson Japan K.K.*

(Replaces S5-185327)

**Decision:** The document was **approved**.

**S5-185098 Presentation of TS 28.541 for approval**

*Type: TS or TR cover For: Approval  
 28.541 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

SA5 vice-chairman (Orange): there was no decision so far on TS titles so we will come back to this

**Decision:** The document was **revised to S5-185604**.

**S5-185604 Presentation of TS 28.541 for approval**

*Type: TS or TR cover For: Approval  
 28.541 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S5-185098)

**Decision:** The document was **approved**.

**S5-185092 CR 28.659 Update E-UTRAN SS definitions to support EN-DC management**

*Type: CR For: Agreement  
 28.659 v15.1.0 CR-0024 Cat: B (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

Huawei: CR is already covered in S5-185295

**Decision:** The document was **withdrawn**.

**S5-185093 CR 28.657 Add requirement to support ng-eNB management**

*Type: CR For: Agreement  
 28.657 v15.0.0 CR-0008 Cat: B (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **agreed**.

**S5-185094 CR 28.658 Update E-UTRAN IS definitions to support ng-eNB management**

*Type: CR For: Agreement  
 28.658 v15.1.0 CR-0028 Cat: B (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

Huawei: clause 4.3.3.2: nSSAI name should be corrected to align with another place

**Decision:** The document was **revised to S5-185534**.

**S5-185534 CR 28.658 Update E-UTRAN IS definitions to support ng-eNB management**

*Type: CR For: Agreement  
 28.658 v15.1.0 CR-0028 rev 1 Cat: B (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S5-185094)

**Discussion:**

SA5 vice-chairman (Huawei): CR cover page should not have revision marks

**Decision:** The document was **revised to S5-185605**.

**S5-185605 CR 28.658 Update E-UTRAN IS definitions to support ng-eNB management**

*Type: CR For: Agreement  
 28.658 v15.1.0 CR-0028 rev 2 Cat: B (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S5-185534)

**Decision:** The document was **agreed**.

**S5-185096 CR 28.709 Update EPC SS definitions to support management of EN-DC and 5G interworking**

*Type: CR For: Agreement  
 28.709 v15.0.0 CR-0010 Cat: B (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **agreed**.

**S5-185295 Rel-15 CR 28.659 Update E-UTRAN SS definitions to support ng-eNB management**

*Type: CR For: Agreement  
 28.659 v15.1.0 CR-0025 Cat: B (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **agreed**.

**S5-185095 CR 28.659 Update E-UTRAN SS definitions to support ng-eNB management**

*Type: CR For: Agreement  
 28.658 v15.1.0 CR-0029 Cat: B (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **withdrawn**.

**S5-185059 TD Rel-15 28541 NR cell relation with node**

*Type: discussion For: Endorsement  
 28.541 v..  
 Source: Ericsson Inc.*

**Decision:** The document was **withdrawn**.

**S5-185025 Minutes of Network Resource Model (NRM) for 5G networks and network slicing**

*Type: report For: (not specified)  
 Source: Rapporteur (Nokia)*

**Discussion:**

SA5 vice-chairman (Huawei): should be 100%; 28.540 and 28.541 will be for email agreement to cover SA5 #120 changes

**Decision:** The document was **noted**.

**S5-185626 TS 28.540 v1.2.0**

*Type: draft TS For: Agreement  
 28.540 v1.2.0  
 Source: Nokia*

**Decision:** The document was **approved**.

**S5-185627 TS 28.541 v1.2.0**

*Type: draft TS For: Agreement  
 28.541 v1.2.0  
 Source: Nokia*

**Decision:** The document was **approved**.

#### 6.4.4 Fault Supervision for 5G networks and network slicing

**S5-185280 Discussion Sequence Proposal for 6.4.4**

*Type: discussion For: Information  
 Source: ZTE Corporation*

**Discussion:**

Nokia: S5-1805308 was late but includes important parts

Ericsson: the question is whether S5-185308 should be in AI 6.4.4 or in AI 6.4.1

**Decision:** The document was **noted**.

**S5-185169 pCR 28.545 Update fault supervision management services components**

*Type: pCR For: Approval  
 28.545 v0.5.2  
 Source: Huawei*

**Discussion:**

Ericsson: spec should be changed to 28.852

ZTE: has a related pCR

**Decision:** The document was **revised to S5-185441**.

**S5-185441 pCR 28.545 Update fault supervision management services components**

*Type: pCR For: Approval  
 28.545 v0.5.2  
 Source: Huawei, ZTE Corporation*

(Replaces S5-185169)

**Discussion:**

includes also changes of S5-185268

**Decision:** The document was **approved**.

**S5-185268 Update the introduction section and referances**

*Type: pCR For: Approval  
 28.545 v0.5.2  
 Source: ZTE Corporation*

**Discussion:**

SA5 vice-chairman (Huawei): it seems this pCR can be covered in S5-185441 as well to avoid the clash

Ericsson: "it's" should be "its"

SA5 vice-chairman (Huawei): can be updated in S5-185441 as well

conclusion: merged into S5-18

**Decision:** The document was **merged**.

**S5-185269 pCR 28.545 Add abbreviations**

*Type: pCR For: Approval  
 28.545 v0.5.2  
 Source: ZTE Corporation*

**Discussion:**

SA5 vice-chairman (Huawei): check abbreviations vs. 21.905

Ericsson: reference is wrong in section 2: 32.545 should say 28.545

Nokia: should "MS" not be avoided? one suggestion was to use "MnS"

SA5 vice-chairman (Huawei): any objection to use "MnS" for Management Service? non; so we go for this abbreviation, other specs to align to this decisions as well

**Decision:** The document was **revised to S5-185443**.

**S5-185443 pCR 28.545 Add abbreviations**

*Type: pCR For: Approval  
 28.545 v0.5.2  
 Source: ZTE Corporation*

(Replaces S5-185269)

**Decision:** The document was **approved**.

**S5-185270 pCR 28.545 Update the requirement tags**

*Type: pCR For: Approval  
 28.545 v0.5.2  
 Source: ZTE Corporation*

**Decision:** The document was **approved**.

**S5-185271 pCR 28.545 Remove editor's note**

*Type: pCR For: Approval  
 28.545 v0.5.2  
 Source: ZTE Corporation*

**Decision:** The document was **approved**.

**S5-185170 pCR 28.545 Procedures for alarm subscription supervision and notification**

*Type: pCR For: Approval  
 28.545 v0.5.2  
 Source: Huawei*

**Discussion:**

Nokia: diagram looks strange, actually the text needs to be updated as well

Ericsson: "succeed" should be replaced by "successful"

ZTE: how producer will deal with alarms is not clear enough

Nokia: "subscription resources" text should be phrased more neutral; whole paragraph and note are not needed

**Decision:** The document was **revised to S5-185444**.

**S5-185444 pCR 28.545 Procedures for alarm subscription supervision and notification**

*Type: pCR For: Approval  
 28.545 v0.5.2  
 Source: Huawei*

(Replaces S5-185170)

**Decision:** The document was **approved**.

**S5-185057 pCR on TS 28.546 Mapping for notifyNewAlarm**

*Type: pCR For: Approval  
 28.546 v0.3.0  
 Source: China Mobile Com. Corporation*

**Decision:** The document was **withdrawn**.

**S5-185079 Revised WID on Fault supervision for 5G network and network slicing**

*Type: WID revised For: Agreement  
 Source: ZTE Corporation*

**Discussion:**

Tdoc was at first agreed and then revised to align TS title(s) (see S5-185524)

**Decision:** The document was **revised to S5-185555**.

**S5-185555 Revised WID on Fault supervision for 5G network and network slicing**

*Type: WID revised For: Agreement  
 Source: ZTE Corporation*

(Replaces S5-185079)

**Decision:** The document was **approved**.

**S5-185277 Presentation of TS.28.545 to SA for approval**

*Type: TS or TR cover For: Approval  
 28.545 v0.5.2  
 Source: ZTE Corporation*

**Discussion:**

SA5 vice-chairman (Huawei): TS will be sent for information & approval

Tdoc was at first approved and then revised to align TS title(s) (see S5-185524)

**Decision:** The document was **revised to S5-185556**.

**S5-185556 Presentation of TS.28.545 to SA for approval**

*Type: TS or TR cover For: Approval  
 28.545 v0.5.2  
 Source: ZTE Corporation*

(Replaces S5-185277)

**Decision:** The document was **approved**.

**S5-185026 Minutes of Fault Supervision for 5G networks and network slicing**

*Type: report For: (not specified)  
 Source: Rapporteur (ZTE)*

**Discussion:**

SA5 vice-chairman (Huawei): so 100% and we have 28.545 for email agreement to cover SA5 #120 changes

**Decision:** The document was **noted**.

**S5-185628 TS 28.545 v0.6.0**

*Type: draft TS For: Agreement  
 28.545 v0.6.0  
 Source: ZTE*

**Decision:** The document was **approved**.

#### 6.4.5 Assurance data and Performance Management for 5G networks and network slicing

**S5-185356 Tdoc discussion sequence for WI on Assurance data and PM for 5G networks and network slicing**

*Type: discussion For: Information  
 Source: Intel Corporation (UK) Ltd, China Mobile*

**Decision:** The document was **revised to S5-185498**.

**S5-185498 Tdoc discussion sequence for WI on Assurance data and PM for 5G networks and network slicing**

*Type: discussion For: Information  
 Source: China Mobile, Intel Corporation (UK) Ltd*

(Replaces S5-185356)

**Decision:** The document was **noted**.

**General topics:**

**S5-185210 Revised WID on Assurance data and Performance Management for 5G networks and network slicing**

*Type: WID revised For: Agreement  
 Source: Intel Corporation (UK) Ltd, China Mobile*

**Discussion:**

SA5 vice-chairman (Huawei): Please add UID and TS numbers and update target dates

Nokia: intention to remove overlapping bullets (i.e. REL-16 objectives)?

CMCC: we try to make sure that REL-16 objectives do not overlap

SA5 vice-chairman (Huawei): objectives should only list REL-15 objectives that can be completed by the end of this week

Ericsson: missing still a number of measurements and KPIs as RAN has not yet completed their work

SA5 vice-chairman (Huawei): what cannot be covered in REL-15 has to be shifted to REL-16

**Decision:** The document was **revised to S5-185449**.

**S5-185449 Revised WID on Performance assurance for 5G networks including network slicing**

*Type: WID revised For: Agreement  
 Source: Intel Corporation (UK) Ltd, China Mobile*

(Replaces S5-185210)

**Abstract:**

note: title of the REL-15 WID is modified

**Decision:** The document was **agreed**.

**TS 28.550:**

**S5-185129 pCR TS 28.551 createMeasurementJob clarification**

*Type: pCR For: Approval  
 28.551 v0.3.0  
 Source: Cisco Systems Inc.*

**Discussion:**

Nokia: is not immediate reporting, so not sure that all changes are correct here

Cisco: do you agree on the motivation of the changes?

Nokia: is not happy about "immediately" as there is a minimum time for the reporting

Cisco: immediately here meant that you do not accumulate date but do the reporting (not in 0sec)

Huawei: agrees with Nokia; what is the value of defining a new term for streaming?

Nokia: agrees with some of the changes of the pCR but this is not really "streaming" so we speak a different language here

Orange: "immediately" but after what?

**Decision:** The document was **revised to S5-185450**.

**S5-185450 pCR TS 28.551 createMeasurementJob clarification**

*Type: pCR For: Approval  
 28.551 v0.3.0  
 Source: Cisco Systems Inc.*

(Replaces S5-185129)

**Decision:** The document was **approved**.

**S5-185172 pCR 28.550 Update on MDAS**

*Type: pCR For: Approval  
 28.550 v1.2.2  
 Source: Huawei*

**Discussion:**

Nokia: good to have examples; but we need to say "also for 5G"

Cisco: not everything needs to be described in services

Ericsson: SON not really covered in REL-15

Nokia: it seems people say CCO is a SON function but SON is out-of-scope of REL-15 but it's a valid use case; we have never defined output of MDAS in this case

**Decision:** The document was **revised to S5-185452**.

**S5-185452 pCR 28.550 Update on MDAS**

*Type: pCR For: Approval  
 28.550 v1.2.2  
 Source: Huawei*

(Replaces S5-185172)

**Decision:** The document was **approved**.

**S5-185173 pCR 28.550 Add detectCoverageHole operation for MDAS CCO service**

*Type: pCR For: Approval  
 28.550 v1.2.2  
 Source: Huawei*

**Discussion:**

Nokia: relation between cell and tracking area code? worried that pCRs gives the impression that we do SON but it is not really SON

Ericsson: do we need to discuss SON in this meeting or rather in the future?

**Decision:** The document was **revised to S5-185453**.

**S5-185453 pCR 28.550 Add detectCoverageHole operation for MDAS CCO service**

*Type: pCR For: Approval  
 28.550 v1.2.2  
 Source: Huawei*

(Replaces S5-185173)

**Decision:** The document was **withdrawn**.

**S5-185206 pCR 28.552 Add concept for assurance data**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: Intel Corporation (UK) Ltd, China Mobile*

**Discussion:**

Nokia: concerns with using network and slicing in this text

Cisco: does not like that the Tdoc tries to define something that cannot be defined

CMCC: we think it is useful to define this

Cisco: one example of data that cannot be used for assurance?

**Decision:** The document was **revised to S5-185454**.

**S5-185454 pCR 28.552 Add concept for assurance data**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: Intel Corporation (UK) Ltd, China Mobile*

(Replaces S5-185206)

**Decision:** The document was **withdrawn**.

**S5-185278 Discussion paper on UE throughput Measurement**

*Type: discussion For: Endorsement  
 Source: ZTE, China Mobile*

**Discussion:**

Proposals:

- to send LS to RAN3 to inform the related requirements

- to prepare pCRs to add the definitions of related measurements

Ericsson: it is a good summary of we need to define for dual connectivity in REL-16 and we should send an LS to RAN3

SA5 vice-chairman (Huawei): you really think this work can be done in REL-15 this week?

Cisco: we could put together the measurements?

SA5 vice-chairman (Huawei): should this be rather a RAN3 WI?

conclusion: future LS to RAN3 will be added to action list S5-185019

**Decision:** The document was **noted**.

**S5-185056 pCR 28.552 Add Use Case and Measurements related to DL UE throughput of Split Bear**

*Type: pCR For: Approval  
 28.552 v0.5.1  
 Source: ZTE, China Mobile*

**Discussion:**

is related to S5-185278

**Decision:** The document was **not treated**.

**S5-185198 pCR 28.552 Add registration procedure related measurements for AMF**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: Intel Corporation (UK) Ltd*

**Discussion:**

CMCC: S5-185260 is overlapping with this Tdoc

Nokia: concerned: counting registration accepts may not work as you may get more accepts than original

**Decision:** The document was **revised to S5-185457**.

**S5-185457 pCR 28.552 Add registration procedure related measurements for AMF**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: Intel Corporation (UK) Ltd; China Mobile (Suzhou) Software*

(Replaces S5-185198)

**Discussion:**

includes also aspects of S5-185260

**Decision:** The document was **approved**.

**S5-185260 pCR Add 5G registration measurement in TS 28.553**

*Type: pCR For: Approval  
 28.553 v0.4.0  
 Source: China Mobile (Suzhou) Software*

**Discussion:**

Ericsson: thinks this Tdoc is quite different from S5-185198 (end-to-end and type unclear) so more in favour of Intel's Tdoc

registrations

conclusion: merged into S5-185457

**Decision:** The document was **merged**.

**S5-185187 pCR 28.554 Add management data analytical KPIs on RAN condition**

*Type: pCR For: Approval  
 28.554 v1.2.2  
 Source: Intel Korea, Ltd.*

**Discussion:**

Nokia: is the KPI not fault management? does not agree that this should be in KPI spec, is configuration management data

Ericsson: is this KPI used for autonavigation only?

Intel: is one use case

Huawei: seems to be related to 5GAA requirements and SA2 work but this is not sufficiently explained

Cisco: no explanation how it can be computed

Huawei: same view as Cisco

**Decision:** The document was **revised to S5-185510**.

**S5-185510 pCR 28.554 Add management data analytical KPIs on RAN condition**

*Type: pCR For: Approval  
 28.554 v1.2.2  
 Source: Intel Korea, Ltd.*

(Replaces S5-185187)

**Decision:** The document was **withdrawn**.

**S5-185188 pCR 28.554 Add management data analytical KPIs on cell composite load**

*Type: pCR For: Approval  
 28.554 v1.2.2  
 Source: Intel Korea, Ltd.*

**Discussion:**

Ericsson: where is the load?

Intel: per cell

Ericsson: should be clarified

Nokia: in which units do you measure the KPI and how do you calculate it? range and semantics are not described

ZTE: you cannot see whether load is high or low, formula needed

Huawei: we need to define the semantics

Nokia: Tdoc is oversimplifying and use case is taken out of a blue

Intel: we do not have a definition/method for analytical KPIs, this is the last chance to solve it in REL-15

Nokia: either we solve it properly or we leave it out of the REL but adding a part of a solution is not a good idea

**Decision:** The document was **revised to S5-185511**.

**S5-185511 pCR 28.554 Add management data analytical KPIs on cell composite load**

*Type: pCR For: Approval  
 28.554 v1.2.2  
 Source: Intel Korea, Ltd.*

(Replaces S5-185188)

**Decision:** The document was **withdrawn**.

**S5-185196 pCR 28.554 Add management data analytical KPI - predicted traffic volume**

*Type: pCR For: Approval  
 28.554 v1.2.2  
 Source: Intel Corporation (UK) Ltd*

**Discussion:**

ZTE: is based on another KPI but this is not a standard KPI

Nokia: you are estimating user behaviour but this just guessing

Ericsson: where is KPI calculated? where is the historic data stored?

Cisco: it is completely unclear how this text can be used

**Decision:** The document was **not pursued**.

**TS 28.550:**

**S5-185174 pCR 28.550 RESTful solution for MDAS for coverage hole detection**

*Type: pCR For: Approval  
 28.550 v1.2.2  
 Source: Huawei*

**Discussion:**

Ericsson: Tdoc is intended to collect comments?

Cisco: there is no definition of coverage hole, how do you use this type?

Nokia: appreciates the effort but we have not yet agreed on the upper stages of the solution; we should focus on the semantics/stage 1

**Decision:** The document was **not pursued**.

**S5-185175 pCR 28 550 Clarification on the PM data reporting**

*Type: pCR For: Approval  
 28.550 v1.2.2  
 Source: Huawei*

**Decision:** The document was **approved**.

**S5-185193 pCR 28.550 Add Restful SS for performance assurance services**

*Type: pCR For: Approval  
 28.550 v1.2.2  
 Source: Intel Corporation (UK) Ltd*

**Discussion:**

Nokia: no overlap with 28.xyz (=28.532) work that is ongoing?

Huawei: collection resources

Nokia: talking about tables without the code is difficult, resource structure is missing, only a part is provided here

**Decision:** The document was **revised to S5-185512**.

**S5-185512 pCR 28.550 Add Restful SS for performance assurance services**

*Type: pCR For: Approval  
 28.550 v1.2.2  
 Source: Intel Corporation (UK) Ltd*

(Replaces S5-185193)

**Discussion:**

SA5 vice-chairman (Huawei): we will add later what is missing

**Decision:** The document was **approved**.

**S5-185194 pCR 28.550 Add performance data file XML schema**

*Type: pCR For: Approval  
 28.550 v1.2.2  
 Source: Intel Corporation (UK) Ltd*

**Discussion:**

Nokia: what is new and how is it justified?

**Decision:** The document was **revised to S5-185537**.

**S5-185537 pCR 28.550 Add performance data file XML schema**

*Type: pCR For: Approval  
 28.550 v1.2.2  
 Source: Intel Corporation (UK) Ltd*

(Replaces S5-185194)

**Decision:** The document was **revised to S5-185620**.

**S5-185620 pCR 28.550 Add performance data file XML schema**

*Type: pCR For: Approval  
 28.550 v1.2.2  
 Source: Intel Corporation (UK) Ltd*

(Replaces S5-185537)

**Decision:** The document was **approved**.

**S5-185331 pCR TS 28.550 Further clarification relating to the definifition of management Analytical KPI(s)**

*Type: pCR For: Approval  
 28.550 v1.2.2  
 Source: NEC Corporation*

**Discussion:**

NEC: Tdoc tries to address editor's note, is happy if this pCR is not needed i.e. if there are other solutions

Nokia: KPIs are currently out-of-scope of the TS and the pCR is fine for us

**Decision:** The document was **revised to S5-185513**.

**S5-185513 pCR TS 28.550 Further clarification relating to the definifition of management Analytical KPI(s)**

*Type: pCR For: Approval  
 28.550 v1.2.2  
 Source: NEC Corporation*

(Replaces S5-185331)

**Decision:** The document was **approved**.

**S5-185191 pCR 28.550 Add concept for performance assurance**

*Type: pCR For: Approval  
 28.550 v1.2.2  
 Source: Intel Corporation (UK) Ltd, China Mobile*

**Discussion:**

Cisco: what is the difference to SON?

**Decision:** The document was **revised to S5-185570**.

**S5-185570 pCR 28.550 Add concept for performance assurance**

*Type: pCR For: Approval  
 28.550 v1.2.2  
 Source: Intel Corporation (UK) Ltd, China Mobile*

(Replaces S5-185191)

**Discussion:**

Nokia: assurance is out-of-scope of this spec; not part of REL-15 was the agreement

**Decision:** The document was **revised to S5-185606**.

**S5-185606 pCR 28.550 Add concept for performance assurance**

*Type: pCR For: Approval  
 28.550 v1.2.2  
 Source: Intel Corporation (UK) Ltd, China Mobile*

(Replaces S5-185570)

**Decision:** The document was **withdrawn**.

**S5-185192 pCR 28.550 Update UC and requirements on management data analytics**

*Type: pCR For: Approval  
 28.550 v1.2.2  
 Source: Intel Corporation (UK) Ltd*

**Discussion:**

Huawei: any relation to SA2 analysis?

Nokia: motivation for additional use cases with same contents? copying informative text from the annex from another spec into this spec is unnecessary and creates only a bigger problem

**Decision:** The document was **not pursued**.

**S5-185195 pCR 28.550 Rapporteur clean-up**

*Type: pCR For: Approval  
 28.550 v1.2.2  
 Source: Intel Corporation (UK) Ltd*

**Discussion:**

Nokia: this is adding normative contents on top of the informative annex duplication of the previous Tdoc S5-185192; does not consider this Tdoc as rapporteur's cleanup

**Decision:** The document was **revised to S5-185514**.

**S5-185514 pCR 28.550 alignment of terminology**

*Type: pCR For: Approval  
 28.550 v1.2.2  
 Source: Intel Corporation (UK) Ltd*

(Replaces S5-185195)

**Decision:** The document was **approved**.

**S5-185208 Presentation of TS 28.550 for approval**

*Type: TS or TR cover For: Approval  
 28.550 v1.2.2  
 Source: Intel Corporation (UK) Ltd*

**Discussion:**

Intel: we still need to adapt the title to S5-185524

**Decision:** The document was **revised to S5-185561**.

**S5-185561 Presentation of TS 28.550 for approval**

*Type: TS or TR cover For: Approval  
 28.550 v1.2.2  
 Source: Intel Corporation (UK) Ltd*

(Replaces S5-185208)

**Decision:** The document was **approved**.

**S5-185058 TD PM Control**

*Type: discussion For: Endorsement  
 28.500 v..  
 Source: Ericsson Inc.*

**Discussion:**

Nokia: data reporting via files or notifications?

Erisson: "via notifications" is wrong

**Decision:** The document was **revised to S5-185562**.

**S5-185562 TD PM Control**

*Type: discussion For: Endorsement  
 28.500 v..  
 Source: Ericsson Inc.*

(Replaces S5-185058)

**Discussion:**

SA5 vice-chairman (Huawei): there is no proposal in the Tdoc; can continue until next meeting

**Decision:** The document was **noted**.

**TS 28.552:**

**S5-185199 pCR 28.552 Add PDU session creation measurements for SMF**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: Intel Corporation (UK) Ltd*

**Discussion:**

Ericsson: measurement for one or more AMF? if multiple possible, then this should be clarified

Intel: cause is defined in SA2 spec

Ericsson: requesting cause?

Intel: first one is just the value

Nokia: would like to postpone the decision of this

**Decision:** The document was **approved**.

**S5-185200 pCR 28.552 Add AM policy association establishment related measurements for PCF**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: Intel Corporation (UK) Ltd*

**Discussion:**

Ericsson: V-PCF for visited?

SA5 vice-chairman (Orange): should be added to abbreviation list

**Decision:** The document was **revised to S5-185515**.

**S5-185515 pCR 28.552 Add AM policy association establishment related measurements for PCF**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: Intel Corporation (UK) Ltd*

(Replaces S5-185200)

**Decision:** The document was **approved**.

**S5-185201 pCR 28.552 Add SM policy association establishment related measurements for PCF**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: Intel Corporation (UK) Ltd*

**Discussion:**

NTT DOCOMO: 5.5.2.1 bullet 8: difference to S5-185200?

**Decision:** The document was **approved**.

**S5-185202 pCR 28.552 Add event exposure related measurements for NEF**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: Intel Corporation (UK) Ltd*

**Discussion:**

Ericsson: AS should be added to abbreviations

Intel: new 23.502 reference is captured in a different pCR

**Decision:** The document was **revised to S5-185516**.

**S5-185516 pCR 28.552 Add event exposure related measurements for NEF**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: Intel Corporation (UK) Ltd*

(Replaces S5-185202)

**Discussion:**

Nokia: who measures it?

Orange: item e) needs to be changed

**Decision:** The document was **revised to S5-185608**.

**S5-185608 pCR 28.552 Add event exposure related measurements for NEF**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: Intel Corporation (UK) Ltd*

(Replaces S5-185516)

**Decision:** The document was **withdrawn**.

**S5-185203 pCR 28.552 Add NF service registration related measurements for NRF**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: Intel Corporation (UK) Ltd*

**Discussion:**

Cisco: you analyze performance with the target to analyze performance

Nokia: not enough justification for the use case

Intel: will revise use case description

Nokia: title to be revised?

**Decision:** The document was **revised to S5-185517**.

**S5-185517 pCR 28.552 Add NF service registration related measurements for NRF**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: Intel Corporation (UK) Ltd*

(Replaces S5-185203)

**Discussion:**

Nokia: objecting to it, not convinced of use case; is alternative for fault management

**Decision:** The document was **not pursued**.

**S5-185204 pCR 28.552 Add NF performance measurements related to VR**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: Intel Corporation (UK) Ltd*

**Discussion:**

Huawei: we do not have a GNBCU function

**Decision:** The document was **revised to S5-185518**.

**S5-185518 pCR 28.552 Add NF performance measurements related to VR**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: Intel Corporation (UK) Ltd*

(Replaces S5-185204)

**Discussion:**

SA5 vice-chairman (Huawei): adding a note?

Nokia: measurement will become mandatory but it is useless; who is performing the measurement? we do not have element manager anymore

SA5 vice-chairman (Huawei): can come back next meeting

**Decision:** The document was **not pursued**.

**S5-185205 pCR 28.552 Upate the e2e performance measurements**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: Intel Corporation (UK) Ltd*

**Discussion:**

Ericsson: measurement has to be renamed to an average n to n DL delay measurement; so change "latency" into "delay";

Cisco: in bullet a) it is an UL measurement and in c) it is DL?, we cannot use e.g. when we talk about measurements (either you do it or you don't); where is the measurement performed?

Nokia: in revision KPI is changed into measurement; what is the entity that measures this?; objects to approval of the pCR

Intel: would like to further discuss it offline and keep it open

**Decision:** The document was **not pursued**.

**S5-185261 pCR TS 28.553 Add measurement of registration subscribers**

*Type: pCR For: Approval  
 28.553 v0.4.0  
 Source: China Mobile (Suzhou) Software*

**Discussion:**

CMCC: is actually a pCR to 28.552

Cisco: what is "predefined interval"? you need to define an interval because result will depend on it

Nokia: averaged per NSI ID? sub-counters need to be introduced; "optional" creates problems

conclusion: see S5-185519 which is an update of the contents but a pCR to TS 28.552

**Decision:** The document was **withdrawn**.

**S5-185519 pCR TS 28.553 Add measurement of registration subscribers**

*Type: pCR For: Approval  
 28.552 v0.4.0  
 Source: China Mobile (Suzhou) Software*

**Decision:** The document was **approved**.

**S5-185283 pCR 28.552 Restructuring of clause 5.1**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: Ericsson GmbH, Eurolab*

**Decision:** The document was **approved**.

**S5-185284 pCR 28.552 Scope and References update**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: Ericsson GmbH, Eurolab*

**Decision:** The document was **revised to S5-185520**.

**S5-185520 pCR 28.552 Scope and References update**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: Ericsson GmbH, Eurolab*

(Replaces S5-185284)

**Decision:** The document was **approved**.

**S5-185285 pCR 28.552 Add definitions**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: Ericsson GmbH, Eurolab*

**Discussion:**

SA5 vice-chairman (Orange): multiple sentences in a revision allowed?

MCC: normally a definition shall be able to replace the defined term but you can add a note with further explanation

**Decision:** The document was **revised to S5-185521**.

**S5-185521 pCR 28.552 Add definitions**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: Ericsson GmbH, Eurolab*

(Replaces S5-185285)

**Decision:** The document was **revised to S5-185609**.

**S5-185609 pCR 28.552 Add definitions**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: Ericsson GmbH, Eurolab*

(Replaces S5-185521)

**Decision:** The document was **revised to S5-185615**.

**S5-185615 pCR 28.552 Add definitions**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: Ericsson GmbH, Eurolab*

(Replaces S5-185609)

**Decision:** The document was **approved**.

**S5-185207 pCR 28.552 Rapporteur clean-up**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: Intel Corporation (UK) Ltd*

**Discussion:**

Nokia: is it a cleanup or a technical change?

Ericsson: we will need to merge with Ericsson Tdocs

**Decision:** The document was **revised to S5-185522**.

**S5-185522 pCR 28.552 Rapporteur clean-up**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: Intel Corporation (UK) Ltd*

(Replaces S5-185207)

**Decision:** The document was **approved**.

**S5-185286 pCR 28.552 IP Latency measurement update**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: Ericsson GmbH, Eurolab*

**Discussion:**

Nokia: subset of Intel proposal of S5-185207

Ericsson: suggests to remove S5-185286 and remove the part that is overlapping with S5-185207

**Decision:** The document was **revised to S5-185523**.

**S5-185523 pCR 28.552 IP Latency measurement update**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: Ericsson GmbH, Eurolab*

(Replaces S5-185286)

**Decision:** The document was **approved**.

**S5-185287 pCR 28.552 Number of UE Context Release Request measurements update**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: Ericsson GmbH, Eurolab*

**Decision:** The document was **revised to S5-185541**.

**S5-185541 pCR 28.552 Number of UE Context Release Request measurements update**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: Ericsson GmbH, Eurolab*

(Replaces S5-185287)

**Decision:** The document was **approved**.

**S5-185288 pCR 28.552 Packet Delay measurements update**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: Ericsson GmbH, Eurolab*

**Decision:** The document was **revised to S5-185547**.

**S5-185547 pCR 28.552 Packet Delay measurements update**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: Ericsson GmbH, Eurolab*

(Replaces S5-185288)

**Decision:** The document was **approved**.

**S5-185289 pCR 28.552 Packet drop measurements update**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: Ericsson GmbH, Eurolab*

**Decision:** The document was **revised to S5-185548**.

**S5-185548 pCR 28.552 Packet drop measurements update**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: Ericsson GmbH, Eurolab*

(Replaces S5-185289)

**Decision:** The document was **approved**.

**S5-185290 pCR 28.552 Packet loss measurements corrections and update**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: Ericsson GmbH, Eurolab*

**Decision:** The document was **revised to S5-185549**.

**S5-185549 pCR 28.552 Packet loss measurements corrections and update**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: Ericsson GmbH, Eurolab*

(Replaces S5-185290)

**Decision:** The document was **approved**.

**S5-185291 pCR 28.552 PRB Usage measurements update**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: Ericsson GmbH, Eurolab*

**Decision:** The document was **approved**.

**S5-185292 pCR 28.552 RRC connection number measurements update**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: Ericsson GmbH, Eurolab*

**Discussion:**

Ericsson: some changes for alignment needed

**Decision:** The document was **revised to S5-185550**.

**S5-185550 pCR 28.552 RRC connection number measurements update**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: Ericsson GmbH, Eurolab*

(Replaces S5-185292)

**Decision:** The document was **approved**.

**S5-185293 pCR 28.552 UE throughput measurements update**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: Ericsson GmbH, Eurolab*

**Discussion:**

Huawei: also supports measurements on RRC and not MAC level

**Decision:** The document was **revised to S5-185551**.

**S5-185551 pCR 28.552 UE throughput measurements update**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: Ericsson GmbH, Eurolab*

(Replaces S5-185293)

**Discussion:**

Cisco: "mapped 5QI" is not explained and it is not indicated that this is a special case; were these comments addressed?

Ericsson: not here; LS to RAN3 can be sent to clarify this

Cisco: if we use a term, we have to define it or having a reference to a spec in which it is specified

Ericsson: 38.470 and 38.473 define the behaviour but not the term

Cisco: but then add references

Ericsson: we could revise S5-185521

SA5 vice chairman (Huawei): let's do this

**Decision:** The document was **approved**.

**S5-185279 pCR 28.552 Add Use Case and Measurements related to DL fullly buffered UE throughput**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: ZTE, China Mobile*

**Discussion:**

Ericsson: discussion paper regarding throughput was not endorsed on Wed; needs to be agreed by RAN groups (would like to send an LS) and it is rather for REL-16;

ZTE: does not think that this depends on RAN WGs

Cisco: we have now disaggregated RAN with CU/DU and some information will be in CU and some in DU, unclear how we receive this mass of measurements, so sees a big problem which needs to be addressed

**Decision:** The document was **not pursued**.

**S5-185209 Presentation of TS 28.552 for approval**

*Type: TS or TR cover For: Approval  
 28.552 v0.5.2  
 Source: Intel Corporation (UK) Ltd*

**Discussion:**

Nokia: title needs to be updated (compare S5-185524)

**Decision:** The document was **revised to S5-185552**.

**S5-185552 Presentation of TS 28.552 for approval**

*Type: TS or TR cover For: Approval  
 28.552 v0.5.2  
 Source: Intel Corporation (UK) Ltd*

(Replaces S5-185209)

**Discussion:**

SA5 vice-chairman (Huawei): is for information and approval as it was never sent to SA

**Decision:** The document was **revised to S5-185611**.

**S5-185611 Presentation of TS 28.552 for approval**

*Type: TS or TR cover For: Approval  
 28.552 v0.5.2  
 Source: Intel Corporation (UK) Ltd*

(Replaces S5-185552)

**Decision:** The document was **approved**.

**TS 28.554:**

**S5-185197 pCR 28.554 Add management data analytical KPI - resource utilization tendency**

*Type: pCR For: Approval  
 28.554 v1.2.2  
 Source: Intel Corporation (UK) Ltd*

**Discussion:**

Nokia: we will not be able to agree on any analytic KPIs, NEC had a nice Tdoc to keep the door open

Intel: we can discuss further

Nokia: yes, we can but none of these documents should go for email approval as otherwise we would object

**Decision:** The document was **not pursued**.

**S5-185259 pCR 28.554 Add KPI definition of registered subscribers to UDM of single network slice instance**

*Type: pCR For: Approval  
 28.554 v1.2.2  
 Source: China Mobile (Suzhou) Software*

**Discussion:**

Cisco: unclear how this KPI is used

Ericsson: agrees that it needs a use case to understand how it is used; can any other entity do the measurement than AMF?

CMCC: should be AMF

**Decision:** The document was **revised to S5-185554**.

**S5-185554 pCR 28.554 Add KPI definition of registered subscribers to UDM of single network slice instance**

*Type: pCR For: Approval  
 28.554 v1.2.2  
 Source: China Mobile (Suzhou) Software*

(Replaces S5-185259)

**Decision:** The document was **approved**.

**S5-185281 pCR 28.554 RAN UE Throughput KPI update**

*Type: pCR For: Approval  
 28.554 v1.2.2  
 Source: Ericsson GmbH, Eurolab*

**Discussion:**

Ericsson: we sent measurements to RAN and they said that they can not use them if they are not mapped

Cisco: when mapped a reference to RAN specs should be provided and an indication that this is a particular case

**Decision:** The document was **revised to S5-185557**.

**S5-185557 pCR 28.554 RAN UE Throughput KPI update**

*Type: pCR For: Approval  
 28.554 v1.2.2  
 Source: Ericsson GmbH, Eurolab*

(Replaces S5-185281)

**Decision:** The document was **approved**.

**S5-185282 pCR 28.554 Update based on LS reply**

*Type: pCR For: Approval  
 28.554 v1.2.2  
 Source: Ericsson GmbH, Eurolab*

**Decision:** The document was **approved**.

**S5-185262 pCR Delete editor’s notes in TS 28.554**

*Type: pCR For: Approval  
 28.554 v1.2.2  
 Source: China Mobile (Suzhou) Software*

**Decision:** The document was **revised to S5-185558**.

**S5-185558 pCR Delete editor’s notes in TS 28.554**

*Type: pCR For: Approval  
 28.554 v1.2.2  
 Source: China Mobile (Suzhou) Software*

(Replaces S5-185262)

**Decision:** The document was **approved**.

**S5-185440 Presentation of TS 28.554**

*Type: TS or TR cover For: Approval  
 28.554 v..  
 Source: China Mobile*

**Discussion:**

CMCC: TS title still needs to be aligned with S5-185524

**Decision:** The document was **revised to S5-185559**.

**S5-185559 Presentation of TS 28.554**

*Type: TS or TR cover For: Approval  
 28.554 v..  
 Source: China Mobile*

(Replaces S5-185440)

**Decision:** The document was **approved**.

**S5-185451 Reply LS to S5-182574, S5-193622, S5-184337 on L2 measurements (R3-185114; to: SA5, RAN2; cc: -; contact: Ericsson)**

*Type: LS in For: discussion  
 Original outgoing LS: R3-185114, to -, cc -  
 Source: R3-185114*

**Abstract:**

LS was received on Tue of SA5 #120; moved from AI 6.1 to AI 6.4.5

**Discussion:**

Ericsson: we had another action item on throughput to reply to RAN3, we could combine this with a reply to this LS;

Cisco: mapping is still not explained (in which spec can we find this), we could ask for a spec where 5QIs are mapped

Ericsson: reply LS can be sent from next SA5 meeting

Cisco: would prefer from this meeting and we do not need to combine both answer

**Decision:** The document was **replied to in S5-185560**.

**S5-185560 Reply to R3-185114 = S5-185451 on L2 measurement (to: RAN3; cc: RAN1, RAN2; contact: Ericsson)**

*Type: LS out For: approval  
 to RAN3, cc RAN1, RAN2  
 Source: SA5*

**Decision:** The document was **approved**.

**S5-185256 pCR 28.552 Add F1 setup request measurements**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: China Mobile (Suzhou) Software*

**Decision:** The document was **withdrawn**.

**S5-185257 pCR 28.552 Add measurement for UE CONTEXT MODIFICATION REQUIRE**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: China Mobile (Suzhou) Software*

**Decision:** The document was **withdrawn**.

**S5-185258 pCR 28.552 Add UE-associated F1 reset measurements**

*Type: pCR For: Approval  
 28.552 v0.5.2  
 Source: China Mobile (Suzhou) Software*

**Decision:** The document was **withdrawn**.

**S5-185027 Minutes of Assurance data and Performance Management for 5G networks and network slicing**

*Type: report For: (not specified)  
 Source: Rapporteur (Intel)*

**Discussion:**

SA5 vice-chairman (Huawei): so what is the status? there is no exception so 100%; 28.550, 28.552, 28.554 are for email agreement

**Decision:** The document was **noted**.

**S5-185629 TS 28.550 v1.3.0**

*Type: draft TS For: Agreement  
 28.550 v1.3.0  
 Source: Intel*

**Decision:** The document was **approved**.

**S5-185630 TS 28.552 v0.6.0**

*Type: draft TS For: Agreement  
 28.552 v0.6.0  
 Source: Intel*

**Decision:** The document was **approved**.

**S5-185631 TS 28.554 v1.3.0**

*Type: draft TS For: Agreement  
 28.554 v1.3.0  
 Source: CMCC*

**Decision:** The document was **approved**.

#### 6.4.6 Management and virtualization aspects of 5G networks

**S5-185189 Add a procedure to associate an VNF instance with a VNF profile**

*Type: CR For: Agreement  
 28.526 v15.0.0 CR-0012 Cat: F (Rel-15)  
  
 Source: Intel Korea, Ltd.*

**Discussion:**

Ericsson: there are other clauses which use profile id that are not changed?

**Decision:** The document was **revised to S5-185458**.

**S5-185458 Add a procedure to associate an VNF instance with a VNF profile**

*Type: CR For: Agreement  
 28.526 v15.0.0 CR-0012 rev 1 Cat: F (Rel-15)  
  
 Source: Intel Korea, Ltd.*

(Replaces S5-185189)

**Discussion:**

problem with version of reference

Nokia: introduces functionality that is based on functionality specified somewhere else but this is not yet there; why do we not wait until the document is published

SA5 vice-chairman (Huawei): as this is anyway a cat.F CR, it can be done next time

Intel: we have only requirements but no solution

SA5 vice-chairman (Huawei): WI is not correct

SA5 vice-chairman (Huawei): then we should move the WI to REL-16 and remove requirements from REL-15 and move them to REL-16; or you bring the solution next meeting with cat.F CR

**Decision:** The document was **not pursued**.

**S5-185190 Add a procedure to associate an PNF with a PNF profile**

*Type: CR For: Agreement  
 28.526 v15.0.0 CR-0013 Cat: F (Rel-15)  
  
 Source: Intel Korea, Ltd.*

**Discussion:**

Ericsson: attributes do not exist for PNF

**Decision:** The document was **revised to S5-185459**.

**S5-185459 Add a procedure to associate an PNF with a PNF profile**

*Type: CR For: Agreement  
 28.526 v15.0.0 CR-0013 rev 1 Cat: F (Rel-15)  
  
 Source: Intel Korea, Ltd.*

(Replaces S5-185190)

**Discussion:**

problem with version of reference

**Decision:** The document was **not pursued**.

**S5-185355 Update 5G management architecture**

*Type: CR For: Agreement  
 28.500 v15.0.0 CR-0005 Cat: B (Rel-15)  
  
 Source: Huawei Telecommunication India*

**Abstract:**

The scope of TS 28.500 needs to be extended to 5G network and network slice management.

Also, some modifications to specification TS 28.500 are necessary, for 5G network and

network slice management.

This CR is a direct copy from

DraftCR S5-183623 that

**Discussion:**

Nokia: EPC & IMS limitation was for REL-14 and not for REL-15 so it should rather say "non-service based architecture is shown below"

**Decision:** The document was **revised to S5-185460**.

**S5-185460 Update 5G management architecture**

*Type: CR For: Agreement  
 28.500 v15.0.0 CR-0005 rev 1 Cat: B (Rel-15)  
  
 Source: Huawei Telecommunication India*

(Replaces S5-185355)

**Discussion:**

Nokia: pre-5G figure in REL-15 spec is strange

**Decision:** The document was **not pursued**.

**S5-185028 Minutes of Management and virtualization aspects of 5G networks**

*Type: report For: (not specified)  
 Source: Rapporteur Intel)*

**Discussion:**

SA5 vice-chairman (Huawei): we keep it at 100% and do further things in CRs

**Decision:** The document was **noted**.

#### 6.4.7 REST Solution Sets

SA5 vice-chairman: will add a session for 6.4.7 for Wedneday

**S5-185436 pCR to TS 32.158 Editorial clean-up**

*Type: pCR For: Approval  
 32.158 v1.1.0  
 Source: Nokia*

**Decision:** The document was **approved**.

**S5-185437 Presentation Sheet of TS 32.158 for approval**

*Type: TS or TR cover For: Approval  
 32.158 v..  
 Source: Nokia*

**Decision:** The document was **approved**.

**S5-185438 TS 32.158 v1.2.0**

*Type: draft TS For: Agreement  
 32.158 v1.2.0  
 Source: Nokia*

**Decision:** The document was **approved**.

**S5-185029 Minutes for REST Solution Sets**

*Type: report For: (not specified)  
 Source: Rapporteur(Nokia)*

**Discussion:**

term MnS consumer and producer will be used

**Decision:** The document was **noted**.

#### 6.4.8 Management Enhancement for EPC CUPS

**S5-185176 Rel-15 CR Changes for EPC CUPS in E-UTRAN NRM**

*Type: CR For: Agreement  
 28.658 v15.1.0 CR-0030 Cat: B (Rel-15)  
  
 Source: Huawei*

**Discussion:**

Orange: RAN instead of CN box should be ticked; reason for change and summary to be updated

**Decision:** The document was **revised to S5-185461**.

**S5-185461 Rel-15 CR Changes for EPC CUPS in E-UTRAN NRM**

*Type: CR For: Agreement  
 28.658 v15.1.0 CR-0030 rev 1 Cat: B (Rel-15)  
  
 Source: Huawei*

(Replaces S5-185176)

**Decision:** The document was **agreed**.

**S5-185177 draft CR 28.708 IS NRM IOC changes for EPC CUPS**

*Type: draftCR For: Approval  
 28.708 v15.0.0  
 Source: Huawei*

**Discussion:**

Huawei: should be a CR

SA5 vice-chairman (Huawei): if this is a CR you need to revise the Tdoc

Ericsson: figures should not use colours

Ericsson: CM, FM indications missing, clauses/subclauses for attributes are missing, changes on changes; how will the changes get into stage 2?

MCC: aa to be replaced by clause number when CR is implemented?

Huawei: yes

Orange: reason for change with Tdocs and meeting numbers?

Ericsson: consequences if not approved is not correct

SA5 vice-chairman (Huawei): quite some offline work needed

**Decision:** The document was **revised to S5-185462**.

**S5-185462 CR 28.708 IS NRM IOC changes for EPC CUPS**

*Type: CR For: Agreement  
 28.708 v15.0.0 CR-0008 Cat: B (Rel-15)  
  
 Source: Huawei*

(Replaces S5-185177)

**Decision:** The document was **revised to S5-185612**.

**S5-185612 CR 28.708 IS NRM IOC changes for EPC CUPS**

*Type: CR For: Agreement  
 28.708 v15.0.0 CR-0008 rev 1 Cat: B (Rel-15)  
  
 Source: Huawei*

(Replaces S5-185462)

**Decision:** The document was **agreed**.

**S5-185178 Rel-15 CR 32.426 Addition of PFCP session management measurements**

*Type: CR For: Agreement  
 32.426 v15.0.0 CR-0070 Cat: B (Rel-15)  
  
 Source: Huawei*

**Discussion:**

Ericsson: template not followed, no measurements, 29.244 not completed

Orange: CR says v14.1.0

**Decision:** The document was **revised to S5-185463**.

**S5-185463 Rel-15 CR 32.426 Addition of PFCP session management measurements**

*Type: CR For: Agreement  
 32.426 v15.0.0 CR-0070 rev 1 Cat: B (Rel-15)  
  
 Source: Huawei*

(Replaces S5-185178)

**Decision:** The document was **revised to S5-185613**.

**S5-185613 Rel-15 CR 32.426 Addition of PFCP session management measurements**

*Type: CR For: Agreement  
 32.426 v15.0.0 CR-0070 rev 2 Cat: B (Rel-15)  
  
 Source: Huawei*

(Replaces S5-185463)

**Decision:** The document was **agreed**.

**S5-185179 CR 28.709 SS XML Definition EPC CUPS**

*Type: CR For: Agreement  
 28.709 v15.0.0 CR-0011 Cat: B (Rel-15)  
  
 Source: Huawei*

**Discussion:**

Ericsson: end point instead of links should be used

**Decision:** The document was **revised to S5-185484**.

**S5-185484 CR 28.709 SS XML Definition EPC CUPS**

*Type: CR For: Agreement  
 28.709 v15.0.0 CR-0011 rev 1 Cat: B (Rel-15)  
  
 Source: Huawei*

(Replaces S5-185179)

**Decision:** The document was **agreed**.

**S5-185030 Minutes for Management Enhancement for EPC CUPS**

*Type: report For: (not specified)  
 Source: Rapporteur (Huawei)*

**Discussion:**

SA5 vice-chairman (Huawei): let's say 100% and we have still email agreement of some CRs

**Decision:** The document was **noted**.

### 6.5 Rel-16 Operations, Administration, Maintenance and Provisioning (OAM&P)

#### 6.5.1 Management of QoE measurement collection

**S5-185351 pCR R16 28404-030 Indication that recording has started**

*Type: pCR For: Approval  
 28.404 v0.3.0  
 Source: Ericsson*

**Decision:** The document was **revised to S5-185485**.

**S5-185485 pCR R16 28404-030 Indication that recording has started**

*Type: pCR For: Approval  
 28.404 v0.3.0  
 Source: Ericsson*

(Replaces S5-185351)

**Decision:** The document was **approved**.

**S5-185352 pCR R16 28405-010 Activation of QoE data collection**

*Type: pCR For: Approval  
 28.405 v0.1.0  
 Source: Ericsson*

**Decision:** The document was **approved**.

**S5-185353 pCR R16 28405-010 Handling of measurement collection at handover**

*Type: pCR For: Approval  
 28.405 v0.1.0  
 Source: Ericsson*

**Discussion:**

Huawei: feedback from RAN2: the message may not always be used, so not necessary to send this indication

**Decision:** The document was **approved**.

**S5-185354 pCR R16 28405-010 Reporting of collected data**

*Type: pCR For: Approval  
 28.405 v0.1.0  
 Source: Ericsson*

**Decision:** The document was **approved**.

**S5-185031 Minutes of Management of QoE measurement collection**

*Type: report For: (not specified)  
 Source: Rapporteur (Ericsson)*

**Discussion:**

SA5 vice-chairman (Huawei): 30%, Dec.18

**Decision:** The document was **noted**.

**S5-185634 TS 28.404 v0.4.0**

*Type: draft TS For: Agreement  
 28.404 v0.4.0  
 Source: Ericsson*

**Decision:** The document was **approved**.

**S5-185635 TS 28.405 v0.2.0**

*Type: draft TS For: Agreement  
 28.405 v0.2.0  
 Source: Ericsson*

**Decision:** The document was **approved**.

### 6.6 OAM&P Studies

#### 6.6.1 Study on system and functional aspects of Energy Efficiency in 5G networks

**S5-185073 pCR TR 32.972 – Potential use cases and requirements**

*Type: pCR For: Approval  
 32.972 v0.5.0  
 Source: Orange*

**Discussion:**

Orange: TS titles to be aligned as well

was originally intended to be revised in S5-185566, finally no revision needed

**Decision:** The document was **approved**.

**S5-185566 pCR TR 32.972 – Potential use cases and requirements**

*Type: pCR For: Approval  
 32.972 v0.5.0  
 Source: Orange*

(Replaces S5-185073)

**Decision:** The document was **withdrawn**.

**S5-185074 pCR TR 32.972 - Add conclusion**

*Type: pCR For: Approval  
 32.972 v0.5.0  
 Source: Orange*

**Discussion:**

Huawei: conclusion needs to be aligned with the SID

**Decision:** The document was **revised to S5-185567**.

**S5-185567 pCR TR 32.972 - Add conclusion**

*Type: pCR For: Approval  
 32.972 v0.5.0  
 Source: Orange*

(Replaces S5-185074)

**Decision:** The document was **approved**.

**S5-185075 Revised SID on System and functional aspects of Energy Efficiency in 5G networks**

*Type: SID revised For: Agreement  
 Source: Orange*

**Discussion:**

MCC: for which REL is this SI?

SA5 chairman: is going to REL-16 as REL-15 is already frozen

Orange: one supporting company has still to be added

**Decision:** The document was **revised to S5-185568**.

**S5-185568 Revised SID on System and functional aspects of Energy Efficiency in 5G networks**

*Type: SID revised For: Agreement  
 Source: Orange*

(Replaces S5-185075)

**Decision:** The document was **agreed**.

**S5-185032 Minutes for Study on system and functional aspects of Energy Efficiency in 5G networks**

*Type: report For: (not specified)  
 Source: Rapporteur (ORANGE)*

**Discussion:**

SA5 vice-chairman (Huawei): 85%, Dec.18

**Decision:** The document was **noted**.

**S5-185583 Presentation of TR 32.972 to SA for information**

*Type: TS or TR cover For: Approval  
 32.972 v..  
 Source: Orange*

**Decision:** The document was **approved**.

**S5-185633 TR 32.972 v0.6.0**

*Type: draft TR For: Agreement  
 32.972 v0.6.0  
 Source: Orange*

**Decision:** The document was **approved**.

#### 6.6.2 Study on integration of ONAP DCAE and 3GPP management architecture

ONAP: Open Network Automation Platform; DCAE: Data Collection, Analytics and Events

**S5-185067 pCR 28.900 Restructuring the TR to include CM aspects**

*Type: pCR For: Approval  
 28.900 v0.4.0  
 Source: AT&T, Ericsson, Orange*

**Discussion:**

Cisco: it is useful to clarify that wth "architecture" we mean here software architecture which is different from 3GPP

Orange: the comment may apply more to S5-185069

Ericsson: some text for the scope would be useful

Orange: we welcome inputs to the scope

ATT: there is a scope input for this meeting

ATT: this is REL-16 already

SA5 chairman: rapporteur will take care of this when providing next version of the TR

**Decision:** The document was **approved**.

**S5-185068 pCR 28.900 Restructuring the TR to include CM aspects**

*Type: pCR For: Approval  
 28.900 v0.4.0  
 Source: AT&T, Ericsson, Orange*

**Decision:** The document was **withdrawn**.

**S5-185069 pCR TR 28.900 – Update clause 5 with 5G network management principles**

*Type: pCR For: Approval  
 28.900 v0.4.0  
 Source: AT&T, Orange*

**Discussion:**

Ericsson: why removing references [2] and [3]

Orange: we do not need them anymore

Ericsson: use case is not only 5G

NEC: "interface" should be "interfaces"

MCC: reference numbers should not be completely removed but set to Void

SA5 chairman: assumes the rapporteur will renumber the references

Cisco: "architecture" should say "software architecture";

Nokia: does not see a difference here

Ericsson: specs renaming needs to be considered (see S5-185524)

**Decision:** The document was **revised to S5-185569**.

**S5-185569 pCR TR 28.900 – Update clause 5 with 5G network management principles**

*Type: pCR For: Approval  
 28.900 v0.4.0  
 Source: AT&T, Orange*

(Replaces S5-185069)

**Decision:** The document was **approved**.

**S5-185070 pCR 28.900 – Update clause 6.2 with 5G network management principles**

*Type: pCR For: Approval  
 28.900 v0.4.0  
 Source: AT&T, Orange*

**Discussion:**

Ericsson: in ONAP rel-3 they may change the table

Orange: will update the titles when implementing pCRs

**Decision:** The document was **approved**.

**S5-185071 pCR 28.900 – Update clause 6.3 with 5G network management principles**

*Type: pCR For: Approval  
 28.900 v0.4.0  
 Source: AT&T, Orange*

**Discussion:**

MCC: be careful when you implement the references (it seems multiple pCRs introduce the same specs)

**Decision:** The document was **approved**.

**S5-185072 pCR 28.900 – Update clause 6.4 with 5G network management principles**

*Type: pCR For: Approval  
 28.900 v0.4.0  
 Source: AT&T, Orange*

**Discussion:**

Nokia: Fig 6.4.1.1 should indicate R2 as well

**Decision:** The document was **revised to S5-185571**.

**S5-185571 pCR 28.900 – Update clause 6.4 with 5G network management principles**

*Type: pCR For: Approval  
 28.900 v0.4.0  
 Source: AT&T, Orange*

(Replaces S5-185072)

**Decision:** The document was **approved**.

**S5-185180 pCR 28.900 Potential positioning of ONAP/DCAE wrt. for 3GPP management services**

*Type: pCR For: Approval  
 28.900 v0.4.0  
 Source: Huawei*

**Discussion:**

Nokia: what is "provisioning data reporting"?

Huawei: see 28.531

Nokia: that's not true, so we are surprised

ATT: a few things to be fixed: we need to clarify that we only deal with collection framework; mixing up platform (OAM) and action (Management); 5.x.2-2: utilize should say utilizing

Nokia: DCAE is not a network function so suggests to update Fig.

Orange: would like to keep the figure

**Decision:** The document was **revised to S5-185572**.

**S5-185572 pCR 28.900 Potential positioning of ONAP/DCAE wrt. for 3GPP management services**

*Type: pCR For: Approval  
 28.900 v0.4.0  
 Source: Huawei*

(Replaces S5-185180)

**Decision:** The document was **approved**.

**S5-185294 pCR 28.900 Correct ONAP architecture overview**

*Type: pCR For: Approval  
 28.900 v0.4.0  
 Source: Ericsson Japan K.K.*

**Discussion:**

Orange: recommended in the past to not refer to the Wiki but just to the documentation pages

Ericsson: can discard Rel-3 change

**Decision:** The document was **revised to S5-185573**.

**S5-185573 pCR 28.900 Correct ONAP architecture overview**

*Type: pCR For: Approval  
 28.900 v0.4.0  
 Source: Ericsson Japan K.K.*

(Replaces S5-185294)

**Decision:** The document was **approved**.

**S5-185296 pCR 28.900 Add comparison of used technologies**

*Type: pCR For: Approval  
 28.900 v0.4.0  
 Source: Ericsson Japan K.K.*

**Decision:** The document was **withdrawn**.

**S5-185319 pCR TR 28.900 – Scope input**

*Type: pCR For: Approval  
 28.900 v0.4.0  
 Source: AT&T GNS Belgium SPRL, Orange*

**Abstract:**

Addition of Scope

**Discussion:**

Huawei: scope is wider than the SID

SA5 chairman: we have 2 studies going in this TR

Nokia: first sentence and last paragraph should be removed

MCC: is pCR also addressing scope of the other SI FS\_ONAPCINT?

ATT: yes

MCC: from a management of the SIs it is problematic if 2 SIs are working on the same TR

SA5 chairman: SA approved these SIs working on same TR

**Decision:** The document was **revised to S5-185574**.

**S5-185574 pCR TR 28.900 – Scope input**

*Type: pCR For: Approval  
 28.900 v0.4.0  
 Source: AT&T GNS Belgium SPRL, Orange*

(Replaces S5-185319)

**Decision:** The document was **approved**.

**S5-185325 pCR 28.900 Update list of abbreviations**

*Type: pCR For: Approval  
 28.900 v0.4.0  
 Source: Ericsson Japan K.K.*

**Discussion:**

Nokia: you can refer to the TS for the abbreviations

**Decision:** The document was **revised to S5-185575**.

**S5-185575 pCR 28.900 Update list of abbreviations**

*Type: pCR For: Approval  
 28.900 v0.4.0  
 Source: Ericsson Japan K.K.*

(Replaces S5-185325)

**Decision:** The document was **approved**.

**S5-185328 pCR 28.900 Add comparison of used technologies**

*Type: pCR For: Approval  
 28.900 v0.4.0  
 Source: Ericsson Japan K.K.*

**Decision:** The document was **revised to S5-185576**.

**S5-185576 pCR 28.900 Add comparison of used technologies**

*Type: pCR For: Approval  
 28.900 v0.4.0  
 Source: Ericsson Japan K.K.*

(Replaces S5-185328)

**Decision:** The document was **approved**.

**S5-185033 Minutes of Study on integration of ONAP DCAE and 3GPP management architecture**

*Type: report For: (not specified)  
 Source: Rapporteur (ORANGE)*

**Discussion:**

SA5 vice-chairman (Huawei): 35%, March 19

**Decision:** The document was **noted**.

**S5-185632 TR 28.900 v0.5.0**

*Type: draft TR For: Agreement  
 28.900 v0.5.0  
 Source: Orange*

**Decision:** The document was **approved**.

#### 6.6.3 Study on protocol enhancement for real time communication

**S5-185034 Minutes of Study on protocol enhancement for real time communication**

*Type: report For: (not specified)  
 Source: Rapporteur(Nokia)*

**Decision:** The document was **withdrawn**.

#### 6.6.4 Study on integration of ONAP and 3GPP configuration management services for 5G networks

**S5-185181 pCR 28.900 Potential positioning of APPC wrt. for 3GPP management services**

*Type: pCR For: Approval  
 28.900 v0.4.0  
 Source: Huawei*

**Discussion:**

Ericsson: it is not up to us to debate who is the consumer in ONAP

Orange: after restructuring of TR 28.900 this text would go into clause 6 and not clause 5.x.3

**Decision:** The document was **revised to S5-185577**.

**S5-185577 pCR 28.900 Potential positioning of APPC wrt. for 3GPP management services**

*Type: pCR For: Approval  
 28.900 v0.4.0  
 Source: Huawei*

(Replaces S5-185181)

**Decision:** The document was **approved**.

**S5-185035 Minutes of Study on integration of ONAP and 3GPP configuration management services for 5G networks**

*Type: report For: (not specified)  
 Source: Rapporteur (Ericsson)*

**Discussion:**

SA5 vice-chairman (Huawei): 5%, March 19

**Decision:** The document was **noted**.

#### 6.6.5 Study on management aspects of edge computing

**S5-185540 Discussion sequence for Management aspects of edge computing**

*Type: discussion For: Information  
 Source: Intel*

**Decision:** The document was **endorsed**.

**S5-185168 TR 28.803 skeleton**

*Type: draft TR For: Agreement  
 28.803 v0.0.0  
 Source: Intel Korea, Ltd.*

**Decision:** The document was **withdrawn**.

**S5-185323 TR 28.803 v0.0.0**

*Type: draft TR For: Agreement  
 28.803 v0.0.0  
 Source: Intel Korea, Ltd.*

**Decision:** The document was **agreed**.

**S5-185182 pCR 28.803 add table of content**

*Type: pCR For: Approval  
 28.803 v0.0.0  
 Source: Intel Korea, Ltd.*

**Discussion:**

Huawei: what is the framework? we would not yet include this clause;

Ericsson: intention of the study was to see how 3GPP management interacts with management of EDGE

**Decision:** The document was **revised to S5-185578**.

**S5-185578 pCR 28.803 add table of content**

*Type: pCR For: Approval  
 28.803 v0.0.0  
 Source: Intel Korea, Ltd.*

(Replaces S5-185182)

**Decision:** The document was **approved**.

**S5-185183 pCR 28.803 add scope**

*Type: pCR For: Approval  
 28.803 v0.0.0  
 Source: Intel Korea, Ltd.*

**Discussion:**

Ericsson: interaction of 3GPP Management and EDGE computing management

Intel: text here comes from the approved SID

SA5 chairman: discuss offline to find a solution

**Decision:** The document was **revised to S5-185579**.

**S5-185579 pCR 28.803 add scope**

*Type: pCR For: Approval  
 28.803 v0.0.0  
 Source: Intel Korea, Ltd.*

(Replaces S5-185183)

**Decision:** The document was **approved**.

**S5-185184 pCR 28.803 add concept of edge computing management**

*Type: pCR For: Approval  
 28.803 v0.0.0  
 Source: Intel Korea, Ltd.*

**Discussion:**

Huawei: SA5 can not define EDGE computing architecture, so text needs to be rephrased; "requires cooperation with other SDOs" sounds strange

Intel: diagram is coming from SA2 spec

Nokia: typically "concept" is related to our work, the proposed text talks more what is coming from outside of SA5; 4.1 could rather be renamed to SA2 background

Intel: ok, to change 4.1 to Background

Nokia: ETSI MEC 10-1, 10-2 should be added as well

**Decision:** The document was **revised to S5-185580**.

**S5-185580 pCR 28.803 add concept of edge computing management**

*Type: pCR For: Approval  
 28.803 v0.0.0  
 Source: Intel Korea, Ltd.*

(Replaces S5-185184)

**Discussion:**

Nokia: 3GPP management system has to communicate with other system but why? what is the nature of this communication? Looks like a conclusion of the study. Remove 2nd sentence of last paragraph.

**Decision:** The document was **revised to S5-185614**.

**S5-185614 pCR 28.803 add concept of edge computing management**

*Type: pCR For: Approval  
 28.803 v0.0.0  
 Source: Intel Korea, Ltd.*

(Replaces S5-185580)

**Decision:** The document was **approved**.

**S5-185133 Add potential requirements for edge computing management**

*Type: pCR For: Approval  
 28.803 v0.0.0  
 Source: ETRI*

**Abstract:**

This pCR proposes to add potential requirements for edge computing management.

**Discussion:**

Huawei: it would be useful to bring some use cases to illustrate first what is intended

Intel: you should use revision marks in a pCR

Nokia: at first, we need to be clear about the work split what we want to do and what is coming from outside of 3GPP and what are the interactions

SA5 chairman: is there a good description about what a EDGE computing management system is doing?

Nokia: ETSI MEC 10-1 and 10-2 provides an overview for this

Nokia: is the architeture that we talk about owned by 3GPP (since these requirements are raised)? Do we talk about 3GPP use cases or MEC use cases?

Cisco: worried that we need to review something that may come over night

**Decision:** The document was **not pursued**.

**S5-185185 pCR 28.803 add use cases for UPF and AS location retrieval**

*Type: pCR For: Approval  
 28.803 v0.0.0  
 Source: Intel Korea, Ltd.*

**Discussion:**

Cisco: described use cases are not really used today

Ericsson: somehow security needs to be addressed

Ericsson: how does 3GPP management system know the UPF location?

Nokia: not fully clear what is meant by application server (AS)

Intel: is defined in SA2

Cisco: location is not the end of the story?

Intel: correct

Cisco: so it is like creation of new services

Nokia: deployment of application server is not under operator control so making a requirement to know the location for optimization purposes is putting things upside-down

Intel: is looking at autonomous driving

Nokia: low latency mapping service needed but only UPF and not AS is deployed by the operator

**Decision:** The document was **revised to S5-185581**.

**S5-185581 pCR 28.803 add use cases for UPF and AS location retrieval**

*Type: pCR For: Approval  
 28.803 v0.0.0  
 Source: Intel Korea, Ltd.*

(Replaces S5-185185)

**Decision:** The document was **withdrawn**.

**S5-185186 pCR 28.803 add use cases for UPF and AS relation**

*Type: pCR For: Approval  
 28.803 v0.0.0  
 Source: Intel Korea, Ltd.*

**Discussion:**

Huawei: what is the use of this from the edge computing side?

Intel: this is not about latency but about relation

Huawei: has problems to understand the use case

Cisco: is it allowed in 3GPP that a UE is switching session to another IP address; so doubts about the considered scenario

Ericsson: it seems it is assument that manangement is taking part of traffic

SA5 chairman: maybe what is considered: when UPF is broken and you need to install a new one from the management system

Nokia: redundancy happens before the error happens

**Decision:** The document was **not pursued**.

**S5-185036 Minutes of Study on management aspects of edge computing**

*Type: report For: (not specified)  
 Source: Rapporteur (Intel)*

**Discussion:**

SA5 vice-chairman: 10%, March 19, eamail agreement of 28.803 (Intel)

**Decision:** The document was **revised to S5-185640**.

**S5-185640 Minutes of Study on management aspects of edge computing**

*Type: report For: -  
 Source: Rapporteur (Intel)*

(Replaces S5-185036)

**Decision:** The document was **noted**.

**S5-185636 TR 28.803 v0.1.0**

*Type: draft TR For: Agreement  
 28.803 v0.1.0  
 Source: Intel*

**Decision:** The document was **approved**.

## 7 Charging

Agenda item 7 was chaired by Ms. Maryse Gardella (Nokia).

### 7.1 Charging Plenary

**S5-185037 CH Agenda and Time Plan**

*Type: agenda For: (not specified)  
 Source: CH SWG Chair*

**Decision:** The document was **revised to S5-185366**.

**S5-185366 CH Agenda and Time Plan**

*Type: agenda For: (not specified)  
 Source: CH SWG Chair*

(Replaces S5-185037)

**Decision:** The document was **agreed**.

**S5-185039 LS from CT1 to SA5 on Multi-identity and multi-device requirements**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: C1-184818*

**Discussion:**

conclusion: no LS answer

**Decision:** The document was **noted**.

**S5-185040 Resubmitted Reply LS from CT3 to SA5 on Addition of AVP code definitions**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: C3-183701*

**Decision:** The document was **postponed**.

**S5-185041 LS reply from SA2 ccSA5 to LS on clarification for spending limit control functionality**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: S2-187579*

**Discussion:**

conclusion: no LS answer

**Decision:** The document was **noted**.

**S5-185336 LS reply from SA2 to SA5 on Use of NRF framework by CHF for information**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: S2-187577*

**Decision:** The document was **replied to in S5-185367**.

**S5-185367 Reply to S2-187577 = S5-185336 on Use of NRF framework by CHF for information (to: SA2, CT4; cc: CT3; contact: Ericsson)**

*Type: LS out For: approval  
 to SA2, CT4, cc CT3  
 Source: Ericsson*

**Decision:** The document was **approved**.

**S5-185038 CH Executive Report**

*Type: report For: (not specified)  
 Source: CH SWG Chair*

**Decision:** The document was **revised to S5-185637**.

**S5-185637 CH Executive Report**

*Type: report For: -  
 Source: CH SWG Chair*

(Replaces S5-185038)

**Decision:** The document was **noted**.

**S5-185542 Void**

*Type: other For: discussion  
 Source: Charging SWG*

**Decision:** The document was **withdrawn**.

**S5-185543 Void**

*Type: other For: discussion  
 Source: Charging SWG*

**Decision:** The document was **withdrawn**.

**S5-185544 Void**

*Type: other For: discussion  
 Source: Charging SWG*

**Decision:** The document was **withdrawn**.

**S5-185545 Void**

*Type: other For: discussion  
 Source: Charging SWG*

**Decision:** The document was **withdrawn**.

**S5-185546 Void**

*Type: other For: discussion  
 Source: Charging SWG*

**Decision:** The document was **withdrawn**.

### 7.2 New Charging Work Item proposals

**S5-185103 New WID on Volume Based Charging Aspects for VoLTE**

*Type: WID new For: Agreement  
 Source: China Mobile*

**Decision:** The document was **revised to S5-185368**.

**S5-185368 New WID on Volume Based Charging Aspects for VoLTE**

*Type: WID new For: Agreement  
 Source: China Mobile*

(Replaces S5-185103)

**Decision:** The document was **agreed**.

**S5-185214 New WID on SMS Charging in 5G System Architecture Phase 1**

*Type: WID new For: Agreement  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S5-185369**.

**S5-185369 New WID on SMS Charging in 5G System Architecture Phase 1**

*Type: WID new For: Agreement  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S5-185214)

**Decision:** The document was **revised to S5-185638**.

**S5-185638 New WID on SMS Charging in 5G System Architecture Phase 1**

*Type: WID new For: Agreement  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S5-185369)

**Decision:** The document was **agreed**.

**S5-185483 Exception sheet WID on SMS Charging in 5G System Architecture Phase 1**

*Type: WI exception request For: Agreement  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **agreed**.

### 7.3 Charging Maintenance and Rel-16 small Enhancements

**S5-185101 R15 CR 32.298 Update the value of secondary RAT type**

*Type: CR For: Agreement  
 32.298 v15.3.0 CR-0665 Cat: F (Rel-15)  
  
 Source: China Mobile*

**Decision:** The document was **agreed**.

**S5-185102 R15 CR 32.299 Update the value of secondary RAT type**

*Type: CR For: Agreement  
 32.299 v15.3.0 CR-0809 Cat: F (Rel-15)  
  
 Source: China Mobile*

**Decision:** The document was **agreed**.

**S5-185306 Rel-15 CR 32.298 Add Charging-ID to RAN Secondary RAT Usage Report**

*Type: CR For: Agreement  
 32.298 v15.3.0 CR-0666 Cat: F (Rel-15)  
  
 Source: Ericsson*

**Decision:** The document was **revised to S5-185481**.

**S5-185481 Rel-15 CR 32.298 Add Charging-ID to RAN Secondary RAT Usage Report**

*Type: CR For: Agreement  
 32.298 v15.3.0 CR-0666 rev 1 Cat: F (Rel-15)  
  
 Source: Ericsson*

(Replaces S5-185306)

**Decision:** The document was **agreed**.

**S5-185307 Rel-15 CR 32.299 Add Charging-ID to RAN Secondary RAT Usage Report**

*Type: CR For: Agreement  
 32.299 v15.3.0 CR-0810 Cat: F (Rel-15)  
  
 Source: Ericsson*

**Decision:** The document was **revised to S5-185482**.

**S5-185482 Rel-15 CR 32.299 Add Charging-ID to RAN Secondary RAT Usage Report**

*Type: CR For: Agreement  
 32.299 v15.3.0 CR-0810 rev 1 Cat: F (Rel-15)  
  
 Source: Ericsson*

(Replaces S5-185307)

**Decision:** The document was **agreed**.

### 7.4 Rel-15 Charging

#### 7.4.1 Data Charging in 5G System Architecture Phase 1

**S5-185106 Discussion on online charging and offline charging**

*Type: discussion For: Agreement  
 Source: Huawei Technologies Co. Ltd.*

**Decision:** The document was **noted**.

**S5-185107 Rel-15 pCR 32.255 Update to support offline charging deployment**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Huawei Technologies Co. Ltd.*

**Decision:** The document was **not pursued**.

**S5-185389 Rel-15 pCR 32.255 Clarification on CHF addresses**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Huawei Technologies Co. Ltd.*

**Decision:** The document was **withdrawn**.

**S5-185109 Rel-15 pCR 32.255 Correction on the charging characteristics**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Huawei Technologies Co. Ltd.*

**Decision:** The document was **revised to S5-185370**.

**S5-185370 Rel-15 pCR 32.255 Correction on the charging characteristics**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Huawei Technologies Co. Ltd.*

(Replaces S5-185109)

**Decision:** The document was **approved**.

**S5-185113 Rel-15 pCR 32.255 Correction on the Trigger**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Huawei Technologies Co. Ltd.*

**Decision:** The document was **revised to S5-185371**.

**S5-185371 Rel-15 pCR 32.255 Correction on the Trigger**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Huawei Technologies Co. Ltd.*

(Replaces S5-185113)

**Decision:** The document was **approved**.

**S5-185116 Rel-15 pCR 32.255 Addition of PCC rules and chargeable event**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Huawei Technologies Co. Ltd.*

**Decision:** The document was **revised to S5-185372**.

**S5-185372 Rel-15 pCR 32.255 Addition of PCC rules and chargeable event**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Huawei Technologies Co. Ltd.*

(Replaces S5-185116)

**Decision:** The document was **approved**.

**S5-185114 R15 CR 32.297 Introduce the Bd for 5G Charging**

*Type: CR For: Agreement  
 32.297 v15.0.0 CR-0030 Cat: B (Rel-15)  
  
 Source: Huawei Technologies Co. Ltd.*

**Decision:** The document was **revised to S5-185373**.

**S5-185373 R15 CR 32.297 Introduce the Bd for 5G Charging**

*Type: CR For: Agreement  
 32.297 v15.0.0 CR-0030 rev 1 Cat: B (Rel-15)  
  
 Source: Huawei Technologies Co. Ltd.*

(Replaces S5-185114)

**Decision:** The document was **agreed**.

**S5-185112 Rel-15 pCR 32.255 Addition of Message Flow of the SSC Mode**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Huawei Technologies Co. Ltd.*

**Decision:** The document was **revised to S5-185374**.

**S5-185374 Rel-15 pCR 32.255 Addition of Message Flow of the SSC Mode**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Huawei Technologies Co. Ltd.*

(Replaces S5-185112)

**Decision:** The document was **approved**.

**S5-185115 Rel-15 pCR 32.255 Addition of General description for interworking with EPC**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Huawei Technologies Co. Ltd.*

**Decision:** The document was **revised to S5-185375**.

**S5-185375 Rel-15 pCR 32.255 Addition of General description for interworking with EPC**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Huawei Technologies Co. Ltd.*

(Replaces S5-185115)

**Decision:** The document was **approved**.

**S5-185221 R15 pCR 32.255 Complete set of flows**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S5-185376**.

**S5-185376 R15 pCR 32.255 Complete set of flows**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S5-185221)

**Decision:** The document was **agreed**.

**S5-185218 R15 pCR 32.255 Introduce Network sharing (MOCN)**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S5-185377**.

**S5-185377 R15 pCR 32.255 Introduce Network sharing (MOCN)**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S5-185218)

**Decision:** The document was **approved**.

**S5-185219 R15 pCR 32.255 Remove Editor's Note for CTF**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **approved**.

**S5-185243 Rel-15 pCR 32.255 Delete the Editor's Note in Charging Information**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Huawei Technologies Co. Ltd.*

**Discussion:**

merged into S5-185378

**Decision:** The document was **merged**.

**S5-185220 R15 pCR 32.255 Clarify per UPF charging information**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S5-185378**.

**S5-185378 R15 pCR 32.255 Clarify per UPF charging information**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell, Huawei Technologies Co. Ltd.*

(Replaces S5-185220)

**Discussion:**

includes also aspects of S5-185243

**Decision:** The document was **approved**.

**S5-185222 R15 pCR 32.255 Update PDU session information**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S5-185379**.

**S5-185379 R15 pCR 32.255 Update PDU session information**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S5-185222)

**Decision:** The document was **approved**.

**S5-185235 Rel-15 pCR 32.255 Update of PDU session charging information**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Huawei Technologies Co. Ltd.*

**Decision:** The document was **revised to S5-185380**.

**S5-185380 Rel-15 pCR 32.255 Update of PDU session charging information**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Huawei Technologies Co. Ltd.*

(Replaces S5-185235)

**Decision:** The document was **approved**.

**S5-185312 Rel-15 pCR 32.255 Introduction of CHF-CDR**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Ericsson*

**Discussion:**

conclusion: merged into S5-185381

**Decision:** The document was **merged**.

**S5-185223 R15 pCR 32.255 Update SMF-PDU-CDR**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S5-185381**.

**S5-185381 pCR TS 32.255 Update CDR description**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell, Ericsson*

(Replaces S5-185223)

**Discussion:**

includes aspects of S5-185312

**Decision:** The document was **approved**.

**S5-185315 Rel-15 pCR 32.255 Update partial CDR triggers description**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S5-185400**.

**S5-185400 Rel-15 pCR 32.255 Update partial CDR triggers description**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S5-185315)

**Decision:** The document was **approved**.

**S5-185316 Rel-15 pCR 32.255 Introduce CHF selection**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S5-185464**.

**S5-185464 Rel-15 pCR 32.255 Introduce CHF selection**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S5-185316)

**Decision:** The document was **approved**.

**S5-185224 R15 pCR 32.255 Clarification on Charging Data generation in case of Roaming**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S5-185383**.

**S5-185383 R15 pCR 32.255 Clarification on Charging Data generation in case of Roaming**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S5-185224)

**Decision:** The document was **approved**.

**S5-185225 R15 pCR 32.255 Clarification on Roaming flows description**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S5-185384**.

**S5-185384 R15 pCR 32.255 Clarification on Roaming flows description**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S5-185225)

**Decision:** The document was **approved**.

**S5-185226 R15 pCR 32.255 Introduce CDR generation for roaming**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S5-185385**.

**S5-185385 R15 pCR 32.255 Introduce CDR generation for roaming**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S5-185226)

**Decision:** The document was **approved**.

**S5-185227 R15 pCR 32.255 Update PDU session charging information for roaming**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S5-185386**.

**S5-185386 R15 pCR 32.255 Update PDU session charging information for roaming**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S5-185227)

**Decision:** The document was **approved**.

**S5-185317 Rel-15 pCR 32.255 Detailed message format for converged charging**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S5-185387**.

**S5-185387 Rel-15 pCR 32.255 Detailed message format for converged charging**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S5-185317)

**Decision:** The document was **approved**.

**S5-185228 R15 pCR 32.255 Complete Abbreviations**

*Type: pCR For: Approval  
 32.255 v1.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **approved**.

**S5-185313 Rel-15 CR 32.298 Introduction of CHF-CDR**

*Type: CR For: Agreement  
 32.298 v15.3.0 CR-0667 Cat: B (Rel-15)  
  
 Source: Ericsson*

**Decision:** The document was **revised to S5-185469**.

**S5-185469 Rel-15 CR 32.298 Introduction of CHF-CDR**

*Type: CR For: Agreement  
 32.298 v15.3.0 CR-0667 rev 1 Cat: B (Rel-15)  
  
 Source: Ericsson*

(Replaces S5-185313)

**Decision:** The document was **agreed**.

**S5-185314 Rel-15 CR 32.298 Addition of DataVolumeOctets in generic CDR part**

*Type: CR For: Agreement  
 32.298 v15.3.0 CR-0668 Cat: B (Rel-15)  
  
 Source: Ericsson*

**Decision:** The document was **revised to S5-185472**.

**S5-185472 Rel-15 CR 32.298 Addition of DataVolumeOctets in generic CDR part**

*Type: CR For: Agreement  
 32.298 v15.3.0 CR-0668 rev 1 Cat: B (Rel-15)  
  
 Source: Ericsson*

(Replaces S5-185314)

**Decision:** The document was **agreed**.

**S5-185134 SBI to Diameter Interworking**

*Type: CR For: Agreement  
 32.240 v15.2.0 CR-0405 Cat: B (Rel-15)  
  
 Source: Vodafone Group Plc*

**Discussion:**

conclusion: merged into S5-185473

**Decision:** The document was **merged**.

**S5-185135 SBI to Diameter interworking introduction**

*Type: CR For: Agreement  
 32.240 v15.2.0 CR-0406 Cat: B (Rel-15)  
  
 Source: Vodafone Group Plc*

**Discussion:**

conclusion: merged into S5-185473

**Decision:** The document was **merged**.

**S5-185341 Rel-15 CR 32.240 Diameter to SBI interworking**

*Type: CR For: Agreement  
 32.240 v15.2.0 CR-0407 Cat: B (Rel-15)  
  
 Source: Ericsson*

**Decision:** The document was **revised to S5-185473**.

**S5-185473 Rel-15 CR 32.240 High level overall charging architecture**

*Type: CR For: Agreement  
 32.240 v15.2.0 CR-0407 rev 1 Cat: B (Rel-15)  
  
 Source: Vodafone*

(Replaces S5-185341)

**Discussion:**

includes also aspects of S5-185134 and S5-185135

**Decision:** The document was **agreed**.

**S5-185477 TS 32.255 cover sheet approval**

*Type: TS or TR cover For: Approval  
 32.255 v..  
 Source: Nokia*

**Discussion:**

TS 32.255 was presented last time in SA #80 and not SA #81

**Decision:** The document was **approved**.

**S5-185476 TS 32.255 v1.2.0**

*Type: draft TS For: Agreement  
 32.255 v1.2.0  
 Source: Nokia*

**Decision:** The document was **approved**.

#### 7.4.2 Service Based Interface for 5G Charging

**S5-185108 R15 CR 32.290 Update to support offline charging deployment**

*Type: CR For: Agreement  
 32.290 v15.0.0 CR-0001 Cat: B (Rel-15)  
  
 Source: Huawei Technologies Co. Ltd.*

**Decision:** The document was **not pursued**.

**S5-185110 R15 CR 32.290 Charging Session Definition**

*Type: CR For: Agreement  
 32.290 v15.0.0 CR-0002 Cat: B (Rel-15)  
  
 Source: Huawei Technologies Co. Ltd.*

**Decision:** The document was **agreed**.

**S5-185111 R15 CR 32.290 Correction on CTF in 5G Charging**

*Type: CR For: Agreement  
 32.290 v15.0.0 CR-0003 Cat: B (Rel-15)  
  
 Source: Huawei Technologies Co. Ltd.*

**Decision:** The document was **agreed**.

**S5-185216 R15 CR 32.290 Update combined scenarios**

*Type: CR For: Agreement  
 32.290 v15.0.0 CR-0005 Cat: B (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **agreed**.

**S5-185237 R15 CR 32.290 Correction on the Converged Charging Scenarios**

*Type: CR For: Agreement  
 32.290 v15.0.0 CR-0007 Cat: B (Rel-15)  
  
 Source: Huawei Technologies Co. Ltd.*

**Discussion:**

conclusion: merged into S5-185388

**Decision:** The document was **merged**.

**S5-185339 Rel-15 CR 32.290 Update of description of flows**

*Type: CR For: Agreement  
 32.290 v15.0.0 CR-0015 Cat: B (Rel-15)  
  
 Source: Ericsson*

**Discussion:**

conclusion: merged into S5-185388

**Decision:** The document was **merged**.

**S5-185340 Rel-15 CR 32.290 Adding flow for Notify**

*Type: CR For: Agreement  
 32.290 v15.0.0 CR-0016 Cat: B (Rel-15)  
  
 Source: Ericsson*

**Discussion:**

conclusion: merged into S5-185388

**Decision:** The document was **merged**.

**S5-185244 Rel-15 CR 32.290 Update of Scenarios**

*Type: CR For: Agreement  
 32.290 v15.0.0 CR-0013 Cat: B (Rel-15)  
  
 Source: Huawei Technologies Co. Ltd.*

**Discussion:**

conclusion: merged into S5-185388

**Decision:** The document was **revised to S5-185388**.

**S5-185388 Rel-15 CR 32.290 Update of Scenarios**

*Type: CR For: Agreement  
 32.290 v15.0.0 CR-0013 rev 1 Cat: B (Rel-15)  
  
 Source: Huawei, Ericsson, Nokia, Nokia Shanghai Bell*

(Replaces S5-185244)

**Discussion:**

includes aspects of S5-185339, S5-185237, S5-185340

**Decision:** The document was **agreed**.

**S5-185342 Converged Charging service definition update**

*Type: CR For: Agreement  
 32.290 v15.0.0 CR-0017 Cat: B (Rel-15)  
  
 Source: Openet Telecom*

**Abstract:**

Specify different modes of operation for quota management within the description of the ConvergedCharging service and added a table showing the CHF Services and CHF Service Operations

**Decision:** The document was **agreed**.

**S5-185239 R15 CR 32.290 Correction on Nchf\_ConvergedCharging\_Notify Service Operation**

*Type: CR For: Agreement  
 32.290 v15.0.0 CR-0009 Cat: B (Rel-15)  
  
 Source: Huawei Technologies Co. Ltd.*

**Decision:** The document was **revised to S5-185390**.

**S5-185390 R15 CR 32.290 Correction on Nchf\_ConvergedCharging\_Notify Service Operation**

*Type: CR For: Agreement  
 32.290 v15.0.0 CR-0009 rev 1 Cat: B (Rel-15)  
  
 Source: Huawei Technologies Co. Ltd.*

(Replaces S5-185239)

**Decision:** The document was **agreed**.

**S5-185253 Rel-15 pCR 32.290 Addition of Trigger Mechanism**

*Type: CR For: Agreement  
 32.290 v15.0.0 CR-0014 Cat: B (Rel-15)  
  
 Source: Huawei Technologies Co. Ltd.*

**Decision:** The document was **revised to S5-185394**.

**S5-185394 Rel-15 pCR 32.290 Addition of Trigger Mechanism**

*Type: CR For: Agreement  
 32.290 v15.0.0 CR-0014 rev 1 Cat: B (Rel-15)  
  
 Source: Huawei Technologies Co. Ltd.*

(Replaces S5-185253)

**Discussion:**

conclusion: merged into S5-185391

**Decision:** The document was **merged**.

**S5-185240 R15 CR 32.290 Correction on the Requirement for Converged Charging**

*Type: CR For: Agreement  
 32.290 v15.0.0 CR-0010 Cat: B (Rel-15)  
  
 Source: Huawei Technologies Co. Ltd.*

**Decision:** The document was **revised to S5-185391**.

**S5-185391 R15 CR 32.290 Correction on the Requirement for Converged Charging**

*Type: CR For: Agreement  
 32.290 v15.0.0 CR-0010 rev 1 Cat: B (Rel-15)  
  
 Source: Huawei Technologies Co. Ltd.*

(Replaces S5-185240)

**Discussion:**

includes also aspects of S5-185394

**Decision:** The document was **agreed**.

**S5-185242 Rel-15 CR 32.290 Update of Nchf\_ConvergedCharging\_Create service operation**

*Type: CR For: Agreement  
 32.290 v15.0.0 CR-0012 Cat: B (Rel-15)  
  
 Source: Huawei Technologies Co. Ltd.*

**Discussion:**

conclusion: merged into S5-185392

**Decision:** The document was **merged**.

**S5-185241 R15 CR 32.290 Update of Service Operation**

*Type: CR For: Agreement  
 32.290 v15.0.0 CR-0011 Cat: B (Rel-15)  
  
 Source: Huawei Technologies Co. Ltd.*

**Decision:** The document was **revised to S5-185392**.

**S5-185392 R15 CR 32.290 Update of Service Operation**

*Type: CR For: Agreement  
 32.290 v15.0.0 CR-0011 rev 1 Cat: B (Rel-15)  
  
 Source: Huawei,Ericsson*

(Replaces S5-185241)

**Discussion:**

includes aspects from S5-185242

**Decision:** The document was **agreed**.

**S5-185215 R15 CR 32.290 Introduce Use of NRF Framework**

*Type: CR For: Agreement  
 32.290 v15.0.0 CR-0004 Cat: B (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S5-185393**.

**S5-185393 R15 CR 32.290 Introduce Use of NRF Framework**

*Type: CR For: Agreement  
 32.290 v15.0.0 CR-0004 rev 1 Cat: B (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S5-185215)

**Decision:** The document was **agreed**.

**S5-185318 Discussion NRF information needed for CHF**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Decision:** The document was **noted**.

**S5-185217 R15 CR 32.290 Update Message Content request and response**

*Type: CR For: Agreement  
 32.290 v15.0.0 CR-0006 Cat: B (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell, Huawei, Ericsson*

**Discussion:**

conclusion: merged into S5-185395

**Decision:** The document was **merged**.

**S5-185238 R15 CR 32.290 Correction on Message Content**

*Type: CR For: Agreement  
 32.290 v15.0.0 CR-0008 Cat: B (Rel-15)  
  
 Source: Huawei Technologies Co. Ltd.*

**Decision:** The document was **revised to S5-185395**.

**S5-185395 R15 CR 32.290 Correction on Message Content**

*Type: CR For: Agreement  
 32.290 v15.0.0 CR-0008 rev 1 Cat: B (Rel-15)  
  
 Source: Huawei, Nokia, Nokia Shanghai Bell, Ericsson*

(Replaces S5-185238)

**Discussion:**

includes also aspects of S5-185217

**Decision:** The document was **agreed**.

**S5-185229 R15 pCR 32.291 Update for template alignement**

*Type: pCR For: Approval  
 32.291 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell, Huawei*

**Decision:** The document was **approved**.

**S5-185230 R15 pCR 32.291 Introduce clause 5.1**

*Type: pCR For: Approval  
 32.291 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **approved**.

**S5-185231 R15 pCR 32.291 Use of Feature negotiation**

*Type: pCR For: Approval  
 32.291 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

originally revised in S5-185396, then afterwards S5-185231 was approved

**Decision:** The document was **approved**.

**S5-185396 R15 pCR 32.291 Use of Feature negotiation**

*Type: pCR For: Approval  
 32.291 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **withdrawn**.

**S5-185245 Rel-15 pCR 32.291 Reference**

*Type: pCR For: Approval  
 32.291 v0.4.0  
 Source: Huawei Technologies Co. Ltd.*

**Decision:** The document was **revised to S5-185397**.

**S5-185397 Rel-15 pCR 32.291 Reference**

*Type: pCR For: Approval  
 32.291 v0.4.0  
 Source: Huawei Technologies Co. Ltd.*

(Replaces S5-185245)

**Decision:** The document was **approved**.

**S5-185246 Rel-15 pCR 32.291 Editor's Note Clear up**

*Type: pCR For: Approval  
 32.291 v0.4.0  
 Source: Huawei Technologies Co. Ltd.*

**Decision:** The document was **approved**.

**S5-185248 Rel-15 pCR 32.291 Error handling**

*Type: pCR For: Approval  
 32.291 v0.4.0  
 Source: Huawei Technologies Co. Ltd.*

**Discussion:**

conclusion: merged into S5-185398

**Decision:** The document was **merged**.

**S5-185320 Rel-15 pCR 32.291 Introduction error handling**

*Type: pCR For: Approval  
 32.291 v0.4.0  
 Source: Ericsson*

**Decision:** The document was **revised to S5-185398**.

**S5-185398 Rel-15 pCR 32.291 Introduction error handling**

*Type: pCR For: Approval  
 32.291 v0.4.0  
 Source: Ericsson, Huawei*

(Replaces S5-185320)

**Discussion:**

includes aspects of S5-185248

**Decision:** The document was **approved**.

**S5-185321 Rel-15 pCR 32.291 Update of Service Operations**

*Type: pCR For: Approval  
 32.291 v0.4.0  
 Source: Ericsson*

**Decision:** The document was **approved**.

**S5-185322 Rel-15 pCR 32.291 Update of Resource Standard Methods**

*Type: pCR For: Approval  
 32.291 v0.4.0  
 Source: Ericsson*

**Decision:** The document was **revised to S5-185399**.

**S5-185399 Rel-15 pCR 32.291 Update of Resource Standard Methods**

*Type: pCR For: Approval  
 32.291 v0.4.0  
 Source: Ericsson*

(Replaces S5-185322)

**Decision:** The document was **approved**.

**S5-185249 Rel-15 pCR 32.291 Update of Bindings**

*Type: pCR For: Approval  
 32.291 v0.4.0  
 Source: Huawei Technologies Co. Ltd.*

**Decision:** The document was **revised to S5-185465**.

**S5-185465 Rel-15 pCR 32.291 Update of Bindings**

*Type: pCR For: Approval  
 32.291 v0.4.0  
 Source: Huawei Technologies Co. Ltd.*

(Replaces S5-185249)

**Decision:** The document was **approved**.

**S5-185251 Rel-15 pCR 32.291 Security**

*Type: pCR For: Approval  
 32.291 v0.4.0  
 Source: Huawei Technologies Co. Ltd.*

**Decision:** The document was **approved**.

**S5-185247 Rel-15 pCR 32.291 Resource Definition in 6.1.3.2.2**

*Type: pCR For: Approval  
 32.291 v0.4.0  
 Source: Huawei Technologies Co. Ltd.*

**Discussion:**

conclusion: merged into S5-185466

**Decision:** The document was **merged**.

**S5-185363 R15 pCR 32.291 Update Resource definition and associated methods**

*Type: pCR For: Approval  
 32.291 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

conclusion: merged into S5-185466

**Decision:** The document was **merged**.

**S5-185250 Rel-15 pCR 32.291 Update of Data Model**

*Type: pCR For: Approval  
 32.291 v0.4.0  
 Source: Huawei Technologies Co. Ltd.*

**Decision:** The document was **revised to S5-185466**.

**S5-185466 Rel-15 pCR 32.291 Update of Data Model**

*Type: pCR For: Approval  
 32.291 v0.4.0  
 Source: Huawei Technologies, Nokia, Nokia Shanghai Bell*

(Replaces S5-185250)

**Discussion:**

includes also aspects of S5-18247, S5-185363

**Decision:** The document was **approved**.

**S5-185334 R15 pCR 32.291 Introduce New data types for roaming QBC**

*Type: pCR For: Approval  
 32.291 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S5-185467**.

**S5-185467 R15 pCR 32.291 Introduce New data types for roaming QBC**

*Type: pCR For: Approval  
 32.291 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S5-185334)

**Decision:** The document was **approved**.

**S5-185252 Rel-15 pCR 32.291 Open API**

*Type: pCR For: Approval  
 32.291 v0.4.0  
 Source: Huawei Technologies Co. Ltd.*

**Decision:** The document was **revised to S5-185468**.

**S5-185468 Rel-15 pCR 32.291 Open API**

*Type: pCR For: Approval  
 32.291 v0.4.0  
 Source: Huawei Technologies Co. Ltd.*

(Replaces S5-185252)

**Decision:** The document was **approved**.

**S5-185333 R15 CR 32.298 Introduce new roaming CDR**

*Type: CR For: Agreement  
 32.298 v15.3.0 CR-0669 Cat: B (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S5-185470**.

**S5-185470 R15 CR 32.298 Introduce new Charging Function record type**

*Type: CR For: Agreement  
 32.298 v15.3.0 CR-0669 rev 1 Cat: B (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S5-185333)

**Decision:** The document was **agreed**.

**S5-185337 R15 CR 32.298 Upgrade ASN1 modules version**

*Type: CR For: Agreement  
 32.298 v15.3.0 CR-0670 Cat: B (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S5-185471**.

**S5-185471 R15 CR 32.298 Upgrade ASN1 modules version**

*Type: CR For: Agreement  
 32.298 v15.3.0 CR-0670 rev 1 Cat: B (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S5-185337)

**Decision:** The document was **agreed**.

**S5-185475 TS 32.291 cover sheet approval**

*Type: TS or TR cover For: Approval  
 32.291 v..  
 Source: Huawei*

**Decision:** The document was **approved**.

**S5-185474 TS 32.291 v0.5.0**

*Type: draft TS For: Agreement  
 32.291 v0.5.0  
 Source: Huawei*

**Decision:** The document was **approved**.

#### 7.4.3 Diameter Overload Control for Charging

**S5-185309 Rel-15 CR 32.299 Introduction of reporting and reacting overload handling**

*Type: CR For: Agreement  
 32.299 v15.3.0 CR-0811 Cat: B (Rel-15)  
  
 Source: Ericsson*

**Decision:** The document was **revised to S5-185478**.

**S5-185478 Rel-15 CR 32.299 Introduction of reporting and reacting overload handling**

*Type: CR For: Agreement  
 32.299 v15.3.0 CR-0811 rev 1 Cat: B (Rel-15)  
  
 Source: Ericsson*

(Replaces S5-185309)

**Decision:** The document was **agreed**.

**S5-185310 Rel-15 CR 32.299 Introduction of AVP for Overload Control**

*Type: CR For: Agreement  
 32.299 v15.3.0 CR-0812 Cat: B (Rel-15)  
  
 Source: Ericsson*

**Decision:** The document was **revised to S5-185479**.

**S5-185479 Rel-15 CR 32.299 Introduction of AVP for Overload Control**

*Type: CR For: Agreement  
 32.299 v15.3.0 CR-0812 rev 1 Cat: B (Rel-15)  
  
 Source: Ericsson*

(Replaces S5-185310)

**Decision:** The document was **revised to S5-185382**.

**S5-185382 Rel-15 CR 32.299 Introduction of AVP for Overload Control**

*Type: CR For: Agreement  
 32.299 v15.3.0 CR-0812 rev 2 Cat: B (Rel-15)  
  
 Source: Ericsson*

(Replaces S5-185479)

**Decision:** The document was **agreed**.

**S5-185311 Rel-15 CR 32.299 Introduction of overload AVP description**

*Type: CR For: Agreement  
 32.299 v15.3.0 CR-0813 Cat: B (Rel-15)  
  
 Source: Ericsson*

**Decision:** The document was **revised to S5-185480**.

**S5-185480 Rel-15 CR 32.299 Introduction of overload AVP description**

*Type: CR For: Agreement  
 32.299 v15.3.0 CR-0813 rev 1 Cat: B (Rel-15)  
  
 Source: Ericsson*

(Replaces S5-185311)

**Decision:** The document was **agreed**.

### 7.5 Charging Studies

## 8 Any Other Business

## 9 Closing of the meeting

The TSG SA WG5 chairman Thomas Tovinger (Ericsson) thanked the delegates for participating and contributing to SA5 meeting #120, he thanked the host for organizing the meeting and he closed the meeting on Friday August 24th, 2018 at 15:45.

## Annex A: List of contribution documents

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Document | Title | Source | Decision | Replaces | Replaced by |
| * S5-185000 | * Agenda | * WG Chairman | * approved |  |  |
| * S5-185001 | * IPR and legal declaration | * WG Chairman | * noted |  |  |
| * S5-185002 | * Report from last SA5 meeting | * MCC | * approved |  |  |
| * S5-185003 | * SA5 status report at last SA meeting | * WG Chairman | * noted |  |  |
| * S5-185004 | * SA5 results at last SA meeting | * WG Chairman | * noted |  |  |
| * S5-185005 | * Leaders meeting agenda | * WG Chairman | * noted |  |  |
| * S5-185006 | * Leaders meeting minutes | * WG Chairman | * noted |  |  |
| * S5-185007 | * SA5 Working Procedures | * WG Vice Chair (Huawei) | * approved |  |  |
| * S5-185008 | * SA5 Meeting Facility Requirements | * WG Vice Chair (Orange) | * approved |  |  |
| * S5-185009 | * Process for management of draft TSs/TRs | * WG Chairman | * noted |  |  |
| * S5-185010 | * CR Quality Check | * MCC | * noted |  |  |
| * S5-185011 | * Status of email approvals | * WG Vice Chair (Orange) | * available |  |  |
| * S5-185012 | * SA5 Meeting Calendar | * WG Chairman | * noted |  |  |
| * S5-185013 | * Deliverables due for the NEXT SA Plenary | * MCC | * noted |  |  |
| * S5-185014 | * Ongoing SA5 WIDs and SIDs | * WG Vice Chair (Huawei) | * noted |  |  |
| * S5-185015 | * 3GPP SA5 Work Plan | * MCC | * noted |  |  |
| * S5-185016 | * Work Plan status | * WG Chair | * available |  |  |
| * S5-185017 | * Time Plan for OAM&P | * WG Vice Chair (Huawei) | * revised |  | * S5-185414 |
| * S5-185018 | * OAM Executive Report | * WG Vice Chair (Huawei) | * revised |  | * S5-185641 |
| * S5-185019 | * OAM&P SWG action list | * WG Vice Chair (Huawei) | * revised |  | * S5-185456 |
| * S5-185020 | * Minutes of OAM&P SWG opening session | * WG Vice Chair (Huawei) | * noted |  |  |
| * S5-185021 | * Minutes of New Work Item proposals - OAM&P | * WG Vice Chair (Orange) | * noted |  |  |
| * S5-185022 | * Minutes of OAM&P Maintenance and Rel-15 small Enhancements | * MCC | * noted |  |  |
| * S5-185023 | * Minutes of Management and orchestration of 5G networks and network slicing | * Rapporteur (Ericsson) | * noted |  |  |
| * S5-185024 | * Minutes of Provisioning of 5G networks and network slicing | * Rapporteur (Huawei) | * noted |  |  |
| * S5-185025 | * Minutes of Network Resource Model (NRM) for 5G networks and network slicing | * Rapporteur (Nokia) | * noted |  |  |
| * S5-185026 | * Minutes of Fault Supervision for 5G networks and network slicing | * Rapporteur (ZTE) | * noted |  |  |
| * S5-185027 | * Minutes of Assurance data and Performance Management for 5G networks and network slicing | * Rapporteur (Intel) | * noted |  |  |
| * S5-185028 | * Minutes of Management and virtualization aspects of 5G networks | * Rapporteur Intel) | * noted |  |  |
| * S5-185029 | * Minutes for REST Solution Sets | * Rapporteur(Nokia) | * noted |  |  |
| * S5-185030 | * Minutes for Management Enhancement for EPC CUPS | * Rapporteur (Huawei) | * noted |  |  |
| * S5-185031 | * Minutes of Management of QoE measurement collection | * Rapporteur (Ericsson) | * noted |  |  |
| * S5-185032 | * Minutes for Study on system and functional aspects of Energy Efficiency in 5G networks | * Rapporteur (ORANGE) | * noted |  |  |
| * S5-185033 | * Minutes of Study on integration of ONAP DCAE and 3GPP management architecture | * Rapporteur (ORANGE) | * noted |  |  |
| * S5-185034 | * Minutes of Study on protocol enhancement for real time communication | * Rapporteur(Nokia) | * withdrawn |  |  |
| * S5-185035 | * Minutes of Study on integration of ONAP and 3GPP configuration management services for 5G networks | * Rapporteur (Ericsson) | * noted |  |  |
| * S5-185036 | * Minutes of Study on management aspects of edge computing | * Rapporteur (Intel) | * revised |  | * S5-185640 |
| * S5-185037 | * CH Agenda and Time Plan | * CH SWG Chair | * revised |  | * S5-185366 |
| * S5-185038 | * CH Executive Report | * CH SWG Chair | * revised |  | * S5-185637 |
| * S5-185039 | * LS from CT1 to SA5 on Multi-identity and multi-device requirements | * C1-184818 | * noted |  |  |
| * S5-185040 | * Resubmitted Reply LS from CT3 to SA5 on Addition of AVP code definitions | * C3-183701 | * postponed |  |  |
| * S5-185041 | * LS reply from SA2 ccSA5 to LS on clarification for spending limit control functionality | * S2-187579 | * noted |  |  |
| * S5-185042 | * LS from GSMA to SA5 on Publication of new paper on network slicing and future plans | * GSMA NEST | * postponed |  |  |
| * S5-185043 | * LSout to various organisations on usage of NFV Specifications | * ETSI ISG NFV | * postponed |  |  |
| * S5-185044 | * LS from ETSI NTECH to SA5 on Information about publication of ETSI TS 103 195-2 v1.1.1 “An Architectural Reference Model for Autonomic Networking, Cognitive Networking and Self-Management” | * ETSI TC NTECH | * noted |  |  |
| * S5-185045 | * Resubmitted LS from RAN2 to SA5 on Bluetooth/WLAN measurement collection in MDT | * R2-1808793 | * noted |  |  |
| * S5-185046 | * LS from RAN2 to SA5 on adding measurements on average number of total active UEs | * R2-1809158 | * withdrawn |  | * - |
| * S5-185047 | * LS from RAN2 to SA5 on L2 measurements | * R2-1810957 | * replied to |  |  |
| * S5-185048 | * Reply LS cc SA5 on adding new service type in QMC reporting | * R3-183320 | * noted |  |  |
| * S5-185049 | * Reply LS from SA2 cc SA5 on LS to 3GPP on QoS Prediction | * S2-185846 | * noted |  |  |
| * S5-185050 | * LS out from SA2 to SA5 on 5G GUTI and EPS Interworking | * S2-186176 | * noted |  |  |
| * S5-185051 | * LS from SA2 to SA5 on Data Analytics in SA WG2/NWDAF | * S2-187617 | * replied to |  |  |
| * S5-185052 | * Resubmitted Reply LS from SA4 to SA5 on Attributes for QoE measurement collection | * S4-180240 | * postponed |  |  |
| * S5-185053 | * LS from ITU-T SG2 to SA5 on Methodology harmonization (Reply to “3GPP TSG SA5 - Tdoc S5-176437 -E” and “3GPP TSG SA5 - Tdoc S5-181375 –E”) | * ITU-T SG2 | * replied to |  |  |
| * S5-185054 | * LS from ITU-T SG15 to SA5 on cooperation on REST-based network management framework | * ITU-T SG15 | * postponed |  |  |
| * S5-185055 | * Reply LS from TSG SA cc SA5 to “5G for Industrial Communication” | * TSG SA | * noted |  |  |
| * S5-185056 | * pCR 28.552 Add Use Case and Measurements related to DL UE throughput of Split Bear | * ZTE, China Mobile | * not treated |  |  |
| * S5-185057 | * pCR on TS 28.546 Mapping for notifyNewAlarm | * China Mobile Com. Corporation | * withdrawn |  |  |
| * S5-185058 | * TD PM Control | * Ericsson Inc. | * revised |  | * S5-185562 |
| * S5-185059 | * TD Rel-15 28541 NR cell relation with node | * Ericsson Inc. | * withdrawn |  |  |
| * S5-185060 | * TD Rel-15 28541 NR cell relation with node | * Ericsson Inc. | * noted |  |  |
| * S5-185061 | * pCR Rel-15 TS 28.541 add ME class in UML diagram | * Ericsson Inc. | * revised |  | * S5-185422 |
| * S5-185062 | * pCR Rel-15 28.541 use ExternalXyz class | * Ericsson Inc. | * revised |  | * S5-185421 |
| * S5-185063 | * Rel-15 28.541 Remove colour in UML diagrams | * Ericsson Inc. | * endorsed |  |  |
| * S5-185064 | * pCR Rel-15 28.541 on types for nGCI and gNBId v4 | * Ericsson Inc. | * approved |  |  |
| * S5-185065 | * pCR Rel-15 TS 28541 Cell BWP model fragment | * Ericsson Inc. | * revised |  | * S5-185499 |
| * S5-185066 | * pCR Rel-15 TS 28541 import and not define pLMNIDList | * Ericsson Inc. | * approved |  |  |
| * S5-185067 | * pCR 28.900 Restructuring the TR to include CM aspects | * AT&T, Ericsson, Orange | * approved |  |  |
| * S5-185068 | * pCR 28.900 Restructuring the TR to include CM aspects | * AT&T, Ericsson, Orange | * withdrawn |  |  |
| * S5-185069 | * pCR TR 28.900 – Update clause 5 with 5G network management principles | * AT&T, Orange | * revised |  | * S5-185569 |
| * S5-185070 | * pCR 28.900 – Update clause 6.2 with 5G network management principles | * AT&T, Orange | * approved |  |  |
| * S5-185071 | * pCR 28.900 – Update clause 6.3 with 5G network management principles | * AT&T, Orange | * approved |  |  |
| * S5-185072 | * pCR 28.900 – Update clause 6.4 with 5G network management principles | * AT&T, Orange | * revised |  | * S5-185571 |
| * S5-185073 | * pCR TR 32.972 – Potential use cases and requirements | * Orange | * approved |  | * S5-185566 |
| * S5-185074 | * pCR TR 32.972 - Add conclusion | * Orange | * revised |  | * S5-185567 |
| * S5-185075 | * Revised SID on System and functional aspects of Energy Efficiency in 5G networks | * Orange | * revised |  | * S5-185568 |
| * S5-185076 | * New WID on energy efficiency in 5G networks | * Orange | * revised |  | * S5-185429 |
| * S5-185077 | * Report from SA5#119 Ad-hoc meeting | * MCC | * approved |  |  |
| * S5-185078 | * Revised WID Management and orchestration of 5G networks and network slicing Rev marks | * Ericsson Limited | * revised |  | * S5-185539 |
| * S5-185079 | * Revised WID on Fault supervision for 5G network and network slicing | * ZTE Corporation | * revised |  | * S5-185555 |
| * S5-185080 | * pCR TS 28.541 clean-up | * Nokia Solutions & Networks (I) | * revised |  | * S5-185423 |
| * S5-185081 | * pCR TS 28.540 Add requirements for network slice modeling | * Nokia, Nokia Shanghai Bell | * revised |  | * S5-185419 |
| * S5-185082 | * pCR TS 28.541 Add common notification definitions | * Nokia, Nokia Shanghai Bell | * revised |  | * S5-185424 |
| * S5-185083 | * pCR TS 28.541 Update JSON-based NR NRM SS definitions to keep it aligned with IM definitions | * Nokia, Nokia Shanghai Bell | * approved |  |  |
| * S5-185084 | * pCR TS 28.541 Update XML-based NR NRM SS definitions to keep it aligned with IM definitions | * Nokia, Nokia Shanghai Bell | * revised |  | * S5-185508 |
| * S5-185085 | * pCR TS 28.541 Add YANG-based SS definitions for gNB modeling | * Nokia, Nokia Shanghai Bell | * revised |  | * S5-185358 |
| * S5-185086 | * pCR TS 28.541 Update JSON-based 5GC NRM SS definitions to keep it aligned with IM definitions | * Nokia, Nokia Shanghai Bell | * approved |  |  |
| * S5-185087 | * pCR TS 28.541 Update XML-based 5GC NRM SS definitions to keep it aligned with IM definitions | * Nokia, Nokia Shanghai Bell | * revised |  | * S5-185364 |
| * S5-185088 | * pCR TS 28.541 Add YANG-based SS definitions for 5GC modeling | * Nokia, Nokia Shanghai Bell | * revised |  | * S5-185359 |
| * S5-185089 | * pCR TS 28.541 Add JSON-based SS definitions for network slice modeling | * Nokia, Nokia Shanghai Bell | * approved |  |  |
| * S5-185090 | * pCR TS 28.541 Add XML-based SS definitions for network slice modeling | * Nokia, Nokia Shanghai Bell | * revised |  | * S5-185530 |
| * S5-185091 | * pCR TS 28.541 Add YANG-based SS definitions for network slice modeling | * Nokia, Nokia Shanghai Bell | * revised |  | * S5-185360 |
| * S5-185092 | * CR 28.659 Update E-UTRAN SS definitions to support EN-DC management | * Nokia, Nokia Shanghai Bell | * withdrawn |  |  |
| * S5-185093 | * CR 28.657 Add requirement to support ng-eNB management | * Nokia, Nokia Shanghai Bell | * agreed |  |  |
| * S5-185094 | * CR 28.658 Update E-UTRAN IS definitions to support ng-eNB management | * Nokia, Nokia Shanghai Bell | * revised |  | * S5-185534 |
| * S5-185095 | * CR 28.659 Update E-UTRAN SS definitions to support ng-eNB management | * Nokia, Nokia Shanghai Bell | * withdrawn |  |  |
| * S5-185096 | * CR 28.709 Update EPC SS definitions to support management of EN-DC and 5G interworking | * Nokia, Nokia Shanghai Bell | * agreed |  |  |
| * S5-185097 | * Presentation of TS 28.540 for approval | * Nokia, Nokia Shanghai Bell | * revised |  | * S5-185600 |
| * S5-185098 | * Presentation of TS 28.541 for approval | * Nokia, Nokia Shanghai Bell | * revised |  | * S5-185604 |
| * S5-185099 | * Proposal of TDoc discussion sequence for agenda item 4.2.3 | * Nokia, Nokia Shanghai Bell | * noted |  |  |
| * S5-185100 | * Revised WID Network Resource Model (NRM) for 5G networks and network slicing | * Nokia, Nokia Shanghai Bell | * agreed |  |  |
| * S5-185101 | * R15 CR 32.298 Update the value of secondary RAT type | * China Mobile | * agreed |  |  |
| * S5-185102 | * R15 CR 32.299 Update the value of secondary RAT type | * China Mobile | * agreed |  |  |
| * S5-185103 | * New WID on Volume Based Charging Aspects for VoLTE | * China Mobile | * revised |  | * S5-185368 |
| * S5-185104 | * pCR 28.531 Update UC/Requirement/Procedure for creation of a 3GPP NF | * DOCOMO Communications Lab. | * revised |  | * S5-185416 |
| * S5-185105 | * pCR 28.531 Update NSSI termination uc with considering shared NSSIs | * China Unicom | * revised |  | * S5-185417 |
| * S5-185106 | * Discussion on online charging and offline charging | * Huawei Technologies Co. Ltd. | * noted |  |  |
| * S5-185107 | * Rel-15 pCR 32.255 Update to support offline charging deployment | * Huawei Technologies Co. Ltd. | * not pursued |  | * - |
| * S5-185108 | * R15 CR 32.290 Update to support offline charging deployment | * Huawei Technologies Co. Ltd. | * not pursued |  |  |
| * S5-185109 | * Rel-15 pCR 32.255 Correction on the charging characteristics | * Huawei Technologies Co. Ltd. | * revised |  | * S5-185370 |
| * S5-185110 | * R15 CR 32.290 Charging Session Definition | * Huawei Technologies Co. Ltd. | * agreed |  |  |
| * S5-185111 | * R15 CR 32.290 Correction on CTF in 5G Charging | * Huawei Technologies Co. Ltd. | * agreed |  |  |
| * S5-185112 | * Rel-15 pCR 32.255 Addition of Message Flow of the SSC Mode | * Huawei Technologies Co. Ltd. | * revised |  | * S5-185374 |
| * S5-185113 | * Rel-15 pCR 32.255 Correction on the Trigger | * Huawei Technologies Co. Ltd. | * revised |  | * S5-185371 |
| * S5-185114 | * R15 CR 32.297 Introduce the Bd for 5G Charging | * Huawei Technologies Co. Ltd. | * revised |  | * S5-185373 |
| * S5-185115 | * Rel-15 pCR 32.255 Addition of General description for interworking with EPC | * Huawei Technologies Co. Ltd. | * revised |  | * S5-185375 |
| * S5-185116 | * Rel-15 pCR 32.255 Addition of PCC rules and chargeable event | * Huawei Technologies Co. Ltd. | * revised |  | * S5-185372 |
| * S5-185117 | * Presentation of TS 28.533 to SA for approval | * Ericsson Limited | * revised |  | * S5-185621 |
| * S5-185118 | * pCR 28.533 Edit help - clarify status of Annex B | * Ericsson Limited | * approved |  |  |
| * S5-185119 | * pCR 28.533 Edit help - insert new clause in section 4.3 | * Ericsson Limited | * approved |  |  |
| * S5-185120 | * pCR 28.533 Edit help - remove empty clauses | * Ericsson Limited | * revised |  | * S5-185407 |
| * S5-185121 | * pCR 28.533 Edit help - update references to include references from A.4 | * Ericsson Limited | * approved |  |  |
| * S5-185122 | * pCR 28.533 Resolution of Editors notes | * Ericsson Limited | * revised |  | * S5-185409 |
| * S5-185123 | * pCR 28.533 Update list of abbreviations | * Ericsson Limited | * revised |  | * S5-185445 |
| * S5-185124 | * pCR 28.533 Update style of code for Figure 4.6.2 | * Ericsson Limited | * revised |  | * S5-185487 |
| * S5-185125 | * pCR TS 28.533 Normative architecture aspects | * Cisco Systems Inc. | * revised |  | * S5-185410 |
| * S5-185126 | * pCR TS 28.531 Alignment between clauses 5, 7 and 6 | * Cisco Systems Inc. | * not pursued |  |  |
| * S5-185127 | * pCR TS 28.xyz createMOI clarification | * Cisco Systems Inc. | * approved |  |  |
| * S5-185128 | * pCR TS 28.xyz modifyMOI clarification | * Cisco Systems Inc. | * not pursued |  |  |
| * S5-185129 | * pCR TS 28.551 createMeasurementJob clarification | * Cisco Systems Inc. | * revised |  | * S5-185450 |
| * S5-185130 | * pCR TS 28.541 RRM Policy | * Cisco Systems Inc. | * revised |  | * S5-185503 |
| * S5-185131 | * Revise the procedure of network slice capacity planning | * ETRI | * approved |  |  |
| * S5-185132 | * Add attributes for network slice capacity planning | * ETRI | * revised |  | * S5-185504 |
| * S5-185133 | * Add potential requirements for edge computing management | * ETRI | * not pursued |  |  |
| * S5-185134 | * SBI to Diameter Interworking | * Vodafone Group Plc | * merged |  | * - |
| * S5-185135 | * SBI to Diameter interworking introduction | * Vodafone Group Plc | * merged |  |  |
| * S5-185136 | * Discussion paper on tenant management | * Huawei | * noted |  |  |
| * S5-185137 | * SID Study on 5G network and network slicing tenant management | * Huawei | * revised |  | * S5-185455 |
| * S5-185138 | * WID Intent driven management service for mobile network | * Huawei | * revised |  | * S5-185430 |
| * S5-185139 | * CR 32.425 Add definition of UE active numbers related measurements | * Huawei, China Telecom | * withdrawn |  |  |
| * S5-185140 | * pCR 28.xyz Add notifications for provisioning management service | * Huawei | * revised |  | * S5-185526 |
| * S5-185141 | * pCR 28.xyz Add common subscribe management service | * Huawei | * revised |  | * S5-185527 |
| * S5-185142 | * pCR 28.xyz Add specification level requirements for provisioning | * Huawei | * revised |  | * S5-185528 |
| * S5-185143 | * pCR 28.xyz Add specification level requirements for fault supervision | * Huawei | * not pursued |  |  |
| * S5-185144 | * pCR 28.xyz Add specification level requirements for performance assurance | * Huawei | * not pursued |  |  |
| * S5-185145 | * pCR 28.xyz Add RESTful HTTP-based solution set of notifyprovisioning | * Huawei | * revised |  | * S5-185535 |
| * S5-185146 | * pCR 28.xyz Update Restful HTTP-based solution set of provisioning | * Huawei | * agreed |  |  |
| * S5-185147 | * pCR 28.530 Clean-up proposal | * Huawei | * revised |  | * S5-185488 |
| * S5-185148 | * pCR 28.531 NSD parameterization for NSSI allocation | * Huawei | * revised |  | * S5-185496 |
| * S5-185149 | * pCR 28.533 Update on MDAS | * Huawei | * merged |  |  |
| * S5-185150 | * pCR 28.533 Exposure governance and EGMF further clarification | * Huawei | * revised |  | * S5-185412 |
| * S5-185151 | * pCR 28.533 Update of utilization of management services in functional management architecture | * Huawei | * revised |  | * S5-185413 |
| * S5-185152 | * pCR 28 533 Registration and discovery of management service instances | * Huawei | * not pursued |  |  |
| * S5-185153 | * pCR 28.533 Utilization of management service registration and discovery | * Huawei | * not pursued |  |  |
| * S5-185154 | * Presentation sheet for 28.530 | * Huawei | * revised |  | * S5-185525 |
| * S5-185155 | * Presentation sheet for 28.532 | * Huawei | * approved |  |  |
| * S5-185156 | * pCR 28.531 Rapporteur clean-up proposal | * Huawei | * revised |  | * S5-185415 |
| * S5-185157 | * pCR 28.531 Clean-up proposal for editor's notes | * Huawei | * approved |  |  |
| * S5-185158 | * pCR 28.531 Clean-up for procedures | * Huawei | * approved |  |  |
| * S5-185159 | * pCR 28.531 Update Interface for provisioning of network and network slicing with notifications | * Huawei | * revised |  | * S5-185495 |
| * S5-185160 | * pCR 28.531 Add procedures for communictions services using 5G network | * Huawei | * revised |  | * S5-185418 |
| * S5-185161 | * Revised WID Provisioning of 5G networks and network slicing | * Huawei | * revised |  | * S5-185564 |
| * S5-185162 | * pCR 28.540 Add concept and requirements for management of edge computing | * Huawei | * approved |  |  |
| * S5-185163 | * pCR 28.541 Clean-up information model for network slice | * Huawei | * revised |  | * S5-185502 |
| * S5-185164 | * pCR 28.541 Clean-up of EP\_RP IOC definition | * Huawei | * revised |  | * S5-185425 |
| * S5-185165 | * pCR 28.541 Address the consistency issue for TAC and NSSAI | * Huawei | * revised |  | * S5-185426 |
| * S5-185166 | * pCR 28.541 Update Network Slice Class diagram | * Huawei | * revised |  | * S5-185501 |
| * S5-185167 | * pCR 28.541 Update NR NRM with Cell Relation | * Huawei | * not pursued |  |  |
| * S5-185168 | * TR 28.803 skeleton | * Intel Korea, Ltd. | * withdrawn |  |  |
| * S5-185169 | * pCR 28.545 Update fault supervision management services components | * Huawei | * revised |  | * S5-185441 |
| * S5-185170 | * pCR 28.545 Procedures for alarm subscription supervision and notification | * Huawei | * revised |  | * S5-185444 |
| * S5-185171 | * pCR 28 xyz Add OpenAPI specification for Fault Supervision | * Huawei | * merged |  |  |
| * S5-185172 | * pCR 28.550 Update on MDAS | * Huawei | * revised |  | * S5-185452 |
| * S5-185173 | * pCR 28.550 Add detectCoverageHole operation for MDAS CCO service | * Huawei | * revised |  | * S5-185453 |
| * S5-185174 | * pCR 28.550 RESTful solution for MDAS for coverage hole detection | * Huawei | * not pursued |  |  |
| * S5-185175 | * pCR 28 550 Clarification on the PM data reporting | * Huawei | * approved |  |  |
| * S5-185176 | * Rel-15 CR Changes for EPC CUPS in E-UTRAN NRM | * Huawei | * revised |  | * S5-185461 |
| * S5-185177 | * draft CR 28.708 IS NRM IOC changes for EPC CUPS | * Huawei | * revised |  | * S5-185462 |
| * S5-185178 | * Rel-15 CR 32.426 Addition of PFCP session management measurements | * Huawei | * revised |  | * S5-185463 |
| * S5-185179 | * CR 28.709 SS XML Definition EPC CUPS | * Huawei | * revised |  | * S5-185484 |
| * S5-185180 | * pCR 28.900 Potential positioning of ONAP/DCAE wrt. for 3GPP management services | * Huawei | * revised |  | * S5-185572 |
| * S5-185181 | * pCR 28.900 Potential positioning of APPC wrt. for 3GPP management services | * Huawei | * revised |  | * S5-185577 |
| * S5-185182 | * pCR 28.803 add table of content | * Intel Korea, Ltd. | * revised |  | * S5-185578 |
| * S5-185183 | * pCR 28.803 add scope | * Intel Korea, Ltd. | * revised |  | * S5-185579 |
| * S5-185184 | * pCR 28.803 add concept of edge computing management | * Intel Korea, Ltd. | * revised |  | * S5-185580 |
| * S5-185185 | * pCR 28.803 add use cases for UPF and AS location retrieval | * Intel Korea, Ltd. | * revised |  | * S5-185581 |
| * S5-185186 | * pCR 28.803 add use cases for UPF and AS relation | * Intel Korea, Ltd. | * not pursued |  |  |
| * S5-185187 | * pCR 28.554 Add management data analytical KPIs on RAN condition | * Intel Korea, Ltd. | * revised |  | * S5-185510 |
| * S5-185188 | * pCR 28.554 Add management data analytical KPIs on cell composite load | * Intel Korea, Ltd. | * revised |  | * S5-185511 |
| * S5-185189 | * Add a procedure to associate an VNF instance with a VNF profile | * Intel Korea, Ltd. | * revised |  | * S5-185458 |
| * S5-185190 | * Add a procedure to associate an PNF with a PNF profile | * Intel Korea, Ltd. | * revised |  | * S5-185459 |
| * S5-185191 | * pCR 28.550 Add concept for performance assurance | * Intel Corporation (UK) Ltd, China Mobile | * revised |  | * S5-185570 |
| * S5-185192 | * pCR 28.550 Update UC and requirements on management data analytics | * Intel Corporation (UK) Ltd | * not pursued |  |  |
| * S5-185193 | * pCR 28.550 Add Restful SS for performance assurance services | * Intel Corporation (UK) Ltd | * revised |  | * S5-185512 |
| * S5-185194 | * pCR 28.550 Add performance data file XML schema | * Intel Corporation (UK) Ltd | * revised |  | * S5-185537 |
| * S5-185195 | * pCR 28.550 Rapporteur clean-up | * Intel Corporation (UK) Ltd | * revised |  | * S5-185514 |
| * S5-185196 | * pCR 28.554 Add management data analytical KPI - predicted traffic volume | * Intel Corporation (UK) Ltd | * not pursued |  |  |
| * S5-185197 | * pCR 28.554 Add management data analytical KPI - resource utilization tendency | * Intel Corporation (UK) Ltd | * not pursued |  |  |
| * S5-185198 | * pCR 28.552 Add registration procedure related measurements for AMF | * Intel Corporation (UK) Ltd | * revised |  | * S5-185457 |
| * S5-185199 | * pCR 28.552 Add PDU session creation measurements for SMF | * Intel Corporation (UK) Ltd | * approved |  |  |
| * S5-185200 | * pCR 28.552 Add AM policy association establishment related measurements for PCF | * Intel Corporation (UK) Ltd | * revised |  | * S5-185515 |
| * S5-185201 | * pCR 28.552 Add SM policy association establishment related measurements for PCF | * Intel Corporation (UK) Ltd | * approved |  |  |
| * S5-185202 | * pCR 28.552 Add event exposure related measurements for NEF | * Intel Corporation (UK) Ltd | * revised |  | * S5-185516 |
| * S5-185203 | * pCR 28.552 Add NF service registration related measurements for NRF | * Intel Corporation (UK) Ltd | * revised |  | * S5-185517 |
| * S5-185204 | * pCR 28.552 Add NF performance measurements related to VR | * Intel Corporation (UK) Ltd | * revised |  | * S5-185518 |
| * S5-185205 | * pCR 28.552 Upate the e2e performance measurements | * Intel Corporation (UK) Ltd | * not pursued |  |  |
| * S5-185206 | * pCR 28.552 Add concept for assurance data | * Intel Corporation (UK) Ltd, China Mobile | * revised |  | * S5-185454 |
| * S5-185207 | * pCR 28.552 Rapporteur clean-up | * Intel Corporation (UK) Ltd | * revised |  | * S5-185522 |
| * S5-185208 | * Presentation of TS 28.550 for approval | * Intel Corporation (UK) Ltd | * revised |  | * S5-185561 |
| * S5-185209 | * Presentation of TS 28.552 for approval | * Intel Corporation (UK) Ltd | * revised |  | * S5-185552 |
| * S5-185210 | * Revised WID on Assurance data and Performance Management for 5G networks and network slicing | * Intel Corporation (UK) Ltd, China Mobile | * revised |  | * S5-185449 |
| * S5-185211 | * Proposal for titles of 5G management specifications | * Intel Corporation (UK) Ltd | * noted |  |  |
| * S5-185212 | * New WID on Enhancement of performance assurance | * China Mobile, Intel Corporation (UK) Ltd | * revised |  | * S5-185431 |
| * S5-185213 | * New WID on OAM aspects of LTE and WLAN integration | * Intel Corporation (UK) Ltd | * revised |  | * S5-185432 |
| * S5-185214 | * New WID on SMS Charging in 5G System Architecture Phase 1 | * Nokia, Nokia Shanghai Bell | * revised |  | * S5-185369 |
| * S5-185215 | * R15 CR 32.290 Introduce Use of NRF Framework | * Nokia, Nokia Shanghai Bell | * revised |  | * S5-185393 |
| * S5-185216 | * R15 CR 32.290 Update combined scenarios | * Nokia, Nokia Shanghai Bell | * agreed |  |  |
| * S5-185217 | * R15 CR 32.290 Update Message Content request and response | * Nokia, Nokia Shanghai Bell, Huawei, Ericsson | * merged |  |  |
| * S5-185218 | * R15 pCR 32.255 Introduce Network sharing (MOCN) | * Nokia, Nokia Shanghai Bell | * revised |  | * S5-185377 |
| * S5-185219 | * R15 pCR 32.255 Remove Editor's Note for CTF | * Nokia, Nokia Shanghai Bell | * approved |  |  |
| * S5-185220 | * R15 pCR 32.255 Clarify per UPF charging information | * Nokia, Nokia Shanghai Bell | * revised |  | * S5-185378 |
| * S5-185221 | * R15 pCR 32.255 Complete set of flows | * Nokia, Nokia Shanghai Bell | * revised |  | * S5-185376 |
| * S5-185222 | * R15 pCR 32.255 Update PDU session information | * Nokia, Nokia Shanghai Bell | * revised |  | * S5-185379 |
| * S5-185223 | * R15 pCR 32.255 Update SMF-PDU-CDR | * Nokia, Nokia Shanghai Bell | * revised |  | * S5-185381 |
| * S5-185224 | * R15 pCR 32.255 Clarification on Charging Data generation in case of Roaming | * Nokia, Nokia Shanghai Bell | * revised |  | * S5-185383 |
| * S5-185225 | * R15 pCR 32.255 Clarification on Roaming flows description | * Nokia, Nokia Shanghai Bell | * revised |  | * S5-185384 |
| * S5-185226 | * R15 pCR 32.255 Introduce CDR generation for roaming | * Nokia, Nokia Shanghai Bell | * revised |  | * S5-185385 |
| * S5-185227 | * R15 pCR 32.255 Update PDU session charging information for roaming | * Nokia, Nokia Shanghai Bell | * revised |  | * S5-185386 |
| * S5-185228 | * R15 pCR 32.255 Complete Abbreviations | * Nokia, Nokia Shanghai Bell | * approved |  |  |
| * S5-185229 | * R15 pCR 32.291 Update for template alignement | * Nokia, Nokia Shanghai Bell, Huawei | * approved |  |  |
| * S5-185230 | * R15 pCR 32.291 Introduce clause 5.1 | * Nokia, Nokia Shanghai Bell | * approved |  |  |
| * S5-185231 | * R15 pCR 32.291 Use of Feature negotiation | * Nokia, Nokia Shanghai Bell | * approved |  | * - |
| * S5-185232 | * pCR 28.xyz Add RESTful Solution of notifyChangedAlarm notification | * China Mobile Com. Corporation | * merged |  |  |
| * S5-185233 | * pCR 28.xyz Add RESTful Solution of notifyClearedAlarm notification | * China Mobile Com. Corporation | * merged |  |  |
| * S5-185234 | * pCR 28.xyz Add RESTful Solution of notifyNewAlarm notification | * China Mobile Com. Corporation | * merged |  |  |
| * S5-185235 | * Rel-15 pCR 32.255 Update of PDU session charging information | * Huawei Technologies Co. Ltd. | * revised |  | * S5-185380 |
| * S5-185236 | * pCR 28.xyz Add RESTful HTTP-based solution set of common subscribe and unsubscribe | * HuaWei Technologies Co., Ltd | * revised |  | * S5-185563 |
| * S5-185237 | * R15 CR 32.290 Correction on the Converged Charging Scenarios | * Huawei Technologies Co. Ltd. | * merged |  | * - |
| * S5-185238 | * R15 CR 32.290 Correction on Message Content | * Huawei Technologies Co. Ltd. | * revised |  | * S5-185395 |
| * S5-185239 | * R15 CR 32.290 Correction on Nchf\_ConvergedCharging\_Notify Service Operation | * Huawei Technologies Co. Ltd. | * revised |  | * S5-185390 |
| * S5-185240 | * R15 CR 32.290 Correction on the Requirement for Converged Charging | * Huawei Technologies Co. Ltd. | * revised |  | * S5-185391 |
| * S5-185241 | * R15 CR 32.290 Update of Service Operation | * Huawei Technologies Co. Ltd. | * revised |  | * S5-185392 |
| * S5-185242 | * Rel-15 CR 32.290 Update of Nchf\_ConvergedCharging\_Create service operation | * Huawei Technologies Co. Ltd. | * merged |  |  |
| * S5-185243 | * Rel-15 pCR 32.255 Delete the Editor's Note in Charging Information | * Huawei Technologies Co. Ltd. | * merged |  |  |
| * S5-185244 | * Rel-15 CR 32.290 Update of Scenarios | * Huawei Technologies Co. Ltd. | * revised |  | * S5-185388 |
| * S5-185245 | * Rel-15 pCR 32.291 Reference | * Huawei Technologies Co. Ltd. | * revised |  | * S5-185397 |
| * S5-185246 | * Rel-15 pCR 32.291 Editor's Note Clear up | * Huawei Technologies Co. Ltd. | * approved |  |  |
| * S5-185247 | * Rel-15 pCR 32.291 Resource Definition in 6.1.3.2.2 | * Huawei Technologies Co. Ltd. | * merged |  |  |
| * S5-185248 | * Rel-15 pCR 32.291 Error handling | * Huawei Technologies Co. Ltd. | * merged |  | * - |
| * S5-185249 | * Rel-15 pCR 32.291 Update of Bindings | * Huawei Technologies Co. Ltd. | * revised |  | * S5-185465 |
| * S5-185250 | * Rel-15 pCR 32.291 Update of Data Model | * Huawei Technologies Co. Ltd. | * revised |  | * S5-185466 |
| * S5-185251 | * Rel-15 pCR 32.291 Security | * Huawei Technologies Co. Ltd. | * approved |  |  |
| * S5-185252 | * Rel-15 pCR 32.291 Open API | * Huawei Technologies Co. Ltd. | * revised |  | * S5-185468 |
| * S5-185253 | * Rel-15 pCR 32.290 Addition of Trigger Mechanism | * Huawei Technologies Co. Ltd. | * revised |  | * S5-185394 |
| * S5-185254 | * Discussion on network slice priority | * China Telecom Corporation Ltd. | * revised |  | * S5-185428 |
| * S5-185255 | * New WID network policy management for mobile networks based on NFV scenarios | * China Mobile (Suzhou) Software | * revised |  | * S5-185435 |
| * S5-185256 | * pCR 28.552 Add F1 setup request measurements | * China Mobile (Suzhou) Software | * withdrawn |  |  |
| * S5-185257 | * pCR 28.552 Add measurement for UE CONTEXT MODIFICATION REQUIRE | * China Mobile (Suzhou) Software | * withdrawn |  |  |
| * S5-185258 | * pCR 28.552 Add UE-associated F1 reset measurements | * China Mobile (Suzhou) Software | * withdrawn |  |  |
| * S5-185259 | * pCR 28.554 Add KPI definition of registered subscribers to UDM of single network slice instance | * China Mobile (Suzhou) Software | * revised |  | * S5-185554 |
| * S5-185260 | * pCR Add 5G registration measurement in TS 28.553 | * China Mobile (Suzhou) Software | * merged |  |  |
| * S5-185261 | * pCR TS 28.553 Add measurement of registration subscribers | * China Mobile (Suzhou) Software | * withdrawn |  | * - |
| * S5-185262 | * pCR Delete editor’s notes in TS 28.554 | * China Mobile (Suzhou) Software | * revised |  | * S5-185558 |
| * S5-185263 | * pCR TS 28531 adding network slice priority in procedure of NSI allocation | * China Telecom Corporation Ltd. | * not pursued |  |  |
| * S5-185264 | * Presentation of TS 28.531 to SA for Approval | * Huawei | * revised |  | * S5-185565 |
| * S5-185265 | * pCR 28.xyz Remove Operation getAlarmCount and Operation setComment | * China Mobile Com. Corporation | * not pursued |  |  |
| * S5-185266 | * pCR TS 28541 adding network slice priority in class definitions | * China Telecom Corporation Ltd. | * not pursued |  |  |
| * S5-185267 | * Tdocs discussion sequence for agenda item 6.4.2 | * Huawei | * noted |  |  |
| * S5-185268 | * Update the introduction section and referances | * ZTE Corporation | * merged |  |  |
| * S5-185269 | * pCR 28.545 Add abbreviations | * ZTE Corporation | * revised |  | * S5-185443 |
| * S5-185270 | * pCR 28.545 Update the requirement tags | * ZTE Corporation | * approved |  |  |
| * S5-185271 | * pCR 28.545 Remove editor's note | * ZTE Corporation | * approved |  |  |
| * S5-185272 | * pCR 28.xyz Add RESTful Solution of unsubscribe operation | * ZTE, China Mobile | * merged |  |  |
| * S5-185273 | * pCR 28.xyz Add RESTful Solution of notifications | * ZTE, China Mobile | * merged |  |  |
| * S5-185274 | * Rel-16 CR 32.425 Add definition of UE active numbers related measurements | * Huawei, China Telecom | * revised |  | * S5-185405 |
| * S5-185275 | * pCR 28.xyz Complete the openApi definition of alarminformation | * ZTE, China Mobile | * merged |  |  |
| * S5-185276 | * pCR 28.xyz Add openApi definition of notifications and subscribe | * ZTE, China Mobile | * merged |  |  |
| * S5-185277 | * Presentation of TS.28.545 to SA for approval | * ZTE Corporation | * revised |  | * S5-185556 |
| * S5-185278 | * Discussion paper on UE throughput Measurement | * ZTE, China Mobile | * noted |  |  |
| * S5-185279 | * pCR 28.552 Add Use Case and Measurements related to DL fullly buffered UE throughput | * ZTE, China Mobile | * not pursued |  |  |
| * S5-185280 | * Discussion Sequence Proposal for 6.4.4 | * ZTE Corporation | * noted |  |  |
| * S5-185281 | * pCR 28.554 RAN UE Throughput KPI update | * Ericsson GmbH, Eurolab | * revised |  | * S5-185557 |
| * S5-185282 | * pCR 28.554 Update based on LS reply | * Ericsson GmbH, Eurolab | * approved |  |  |
| * S5-185283 | * pCR 28.552 Restructuring of clause 5.1 | * Ericsson GmbH, Eurolab | * approved |  |  |
| * S5-185284 | * pCR 28.552 Scope and References update | * Ericsson GmbH, Eurolab | * revised |  | * S5-185520 |
| * S5-185285 | * pCR 28.552 Add definitions | * Ericsson GmbH, Eurolab | * revised |  | * S5-185521 |
| * S5-185286 | * pCR 28.552 IP Latency measurement update | * Ericsson GmbH, Eurolab | * revised |  | * S5-185523 |
| * S5-185287 | * pCR 28.552 Number of UE Context Release Request measurements update | * Ericsson GmbH, Eurolab | * revised |  | * S5-185541 |
| * S5-185288 | * pCR 28.552 Packet Delay measurements update | * Ericsson GmbH, Eurolab | * revised |  | * S5-185547 |
| * S5-185289 | * pCR 28.552 Packet drop measurements update | * Ericsson GmbH, Eurolab | * revised |  | * S5-185548 |
| * S5-185290 | * pCR 28.552 Packet loss measurements corrections and update | * Ericsson GmbH, Eurolab | * revised |  | * S5-185549 |
| * S5-185291 | * pCR 28.552 PRB Usage measurements update | * Ericsson GmbH, Eurolab | * approved |  |  |
| * S5-185292 | * pCR 28.552 RRC connection number measurements update | * Ericsson GmbH, Eurolab | * revised |  | * S5-185550 |
| * S5-185293 | * pCR 28.552 UE throughput measurements update | * Ericsson GmbH, Eurolab | * revised |  | * S5-185551 |
| * S5-185294 | * pCR 28.900 Correct ONAP architecture overview | * Ericsson Japan K.K. | * revised |  | * S5-185573 |
| * S5-185295 | * Rel-15 CR 28.659 Update E-UTRAN SS definitions to support ng-eNB management | * Nokia, Nokia Shanghai Bell | * agreed |  |  |
| * S5-185296 | * pCR 28.900 Add comparison of used technologies | * Ericsson Japan K.K. | * withdrawn |  |  |
| * S5-185297 | * pCR 28.540 Support mgmt of Beam-RLM and BFD monitoring & reporting in NRM definitions | * Intel Korea, Ltd. | * revised |  | * S5-185420 |
| * S5-185298 | * pCR 28.541 Add Info Model definitions for NRCellDU SpatialDomainFilter | * Pivotal Commware, Intel Korea, Ltd. | * revised |  | * S5-185500 |
| * S5-185299 | * R15 CR 28658 Wrong terminology | * Ericsson Japan K.K. | * agreed |  |  |
| * S5-185300 | * WID for service management | * Ericsson Limited | * revised |  | * S5-185439 |
| * S5-185301 | * pCR 28.530 Add migration use case and requirement | * Ericsson Limited | * not pursued |  |  |
| * S5-185302 | * pCR 28.533 Update type C definition to include CM | * Ericsson Limited | * revised |  | * S5-185486 |
| * S5-185303 | * pCR 28.533 Include management reference model | * Ericsson Limited | * revised |  | * S5-185411 |
| * S5-185304 | * pCR 28.532 Update state handling of NSI | * Ericsson Limited | * withdrawn |  |  |
| * S5-185305 | * pCR 28.532 State handling of NSSI | * Ericsson Limited | * withdrawn |  |  |
| * S5-185306 | * Rel-15 CR 32.298 Add Charging-ID to RAN Secondary RAT Usage Report | * Ericsson | * revised |  | * S5-185481 |
| * S5-185307 | * Rel-15 CR 32.299 Add Charging-ID to RAN Secondary RAT Usage Report | * Ericsson | * revised |  | * S5-185482 |
| * S5-185308 | * pCR 28.xyz Add stage 3 content for fault supervision | * Nokia Germany | * revised |  | * S5-185446 |
| * S5-185309 | * Rel-15 CR 32.299 Introduction of reporting and reacting overload handling | * Ericsson | * revised |  | * S5-185478 |
| * S5-185310 | * Rel-15 CR 32.299 Introduction of AVP for Overload Control | * Ericsson | * revised |  | * S5-185479 |
| * S5-185311 | * Rel-15 CR 32.299 Introduction of overload AVP description | * Ericsson | * revised |  | * S5-185480 |
| * S5-185312 | * Rel-15 pCR 32.255 Introduction of CHF-CDR | * Ericsson | * merged |  | * - |
| * S5-185313 | * Rel-15 CR 32.298 Introduction of CHF-CDR | * Ericsson | * revised |  | * S5-185469 |
| * S5-185314 | * Rel-15 CR 32.298 Addition of DataVolumeOctets in generic CDR part | * Ericsson | * revised |  | * S5-185472 |
| * S5-185315 | * Rel-15 pCR 32.255 Update partial CDR triggers description | * Nokia, Nokia Shanghai Bell | * revised |  | * S5-185400 |
| * S5-185316 | * Rel-15 pCR 32.255 Introduce CHF selection | * Nokia, Nokia Shanghai Bell | * revised |  | * S5-185464 |
| * S5-185317 | * Rel-15 pCR 32.255 Detailed message format for converged charging | * Nokia, Nokia Shanghai Bell | * revised |  | * S5-185387 |
| * S5-185318 | * Discussion NRF information needed for CHF | * Ericsson | * noted |  |  |
| * S5-185319 | * pCR TR 28.900 – Scope input | * AT&T GNS Belgium SPRL, Orange | * revised |  | * S5-185574 |
| * S5-185320 | * Rel-15 pCR 32.291 Introduction error handling | * Ericsson | * revised |  | * S5-185398 |
| * S5-185321 | * Rel-15 pCR 32.291 Update of Service Operations | * Ericsson | * approved |  |  |
| * S5-185322 | * Rel-15 pCR 32.291 Update of Resource Standard Methods | * Ericsson | * revised |  | * S5-185399 |
| * S5-185323 | * TR 28.803 v0.0.0 | * Intel Korea, Ltd. | * agreed |  |  |
| * S5-185324 | * R15 CR 28.701 Align terminology | * Ericsson Japan K.K. | * revised |  | * S5-185595 |
| * S5-185325 | * pCR 28.900 Update list of abbreviations | * Ericsson Japan K.K. | * revised |  | * S5-185575 |
| * S5-185326 | * pCR 28.540 Update list of abbreviations | * Ericsson Japan K.K. | * approved |  |  |
| * S5-185327 | * pCR 28.541 Update list of abbreviations | * Ericsson Japan K.K. | * revised |  | * S5-185533 |
| * S5-185328 | * pCR 28.900 Add comparison of used technologies | * Ericsson Japan K.K. | * revised |  | * S5-185576 |
| * S5-185329 | * pCR TS 28.530 Further clarification into clause 4.9 Management data analytics for 5G networks and networks with slicing | * NEC Corporation | * merged |  |  |
| * S5-185330 | * pCR TS 28.533 Further clarification into clause 4.7 Management data analytics capability | * NEC Corporation | * revised |  | * S5-185408 |
| * S5-185331 | * pCR TS 28.550 Further clarification relating to the definifition of management Analytical KPI(s) | * NEC Corporation | * revised |  | * S5-185513 |
| * S5-185332 | * pCR TS 28.533 Editorial changes to clause 4.2 and 4.4 | * NEC Corporation | * revised |  | * S5-185406 |
| * S5-185333 | * R15 CR 32.298 Introduce new roaming CDR | * Nokia, Nokia Shanghai Bell | * revised |  | * S5-185470 |
| * S5-185334 | * R15 pCR 32.291 Introduce New data types for roaming QBC | * Nokia, Nokia Shanghai Bell | * revised |  | * S5-185467 |
| * S5-185335 | * pCR 28.531 add the related operation in procedures | * HuaWei Technologies Co., Ltd | * revised |  | * S5-185448 |
| * S5-185336 | * LS reply from SA2 to SA5 on Use of NRF framework by CHF for information | * S2-187577 | * replied to |  |  |
| * S5-185337 | * R15 CR 32.298 Upgrade ASN1 modules version | * Nokia, Nokia Shanghai Bell | * revised |  | * S5-185471 |
| * S5-185338 | * WID Methodology for 5G management specifications | * Ericsson Limited | * revised |  | * S5-185492 |
| * S5-185339 | * Rel-15 CR 32.290 Update of description of flows | * Ericsson | * merged |  |  |
| * S5-185340 | * Rel-15 CR 32.290 Adding flow for Notify | * Ericsson | * merged |  |  |
| * S5-185341 | * Rel-15 CR 32.240 Diameter to SBI interworking | * Ericsson | * revised |  | * S5-185473 |
| * S5-185342 | * Converged Charging service definition update | * Openet Telecom | * agreed |  |  |
| * S5-185343 | * pCR 28.531 Add operations for provisioning management service | * Huawei | * revised |  | * S5-185433 |
| * S5-185344 | * pCR 28.531 Insert connection to definitions in 28.530 | * Ericsson Limited | * revised |  | * S5-185497 |
| * S5-185345 | * Sequence proposal for management and orchestration of 5G networks and network slicing agenda point 6.4.1 | * Ericsson Limited | * revised |  | * S5-185427 |
| * S5-185346 | * Minutes of virtual meeting on 5G restructured specifications on July 19th 2018 | * OAM&P SWG chair (Huawei) | * approved |  |  |
| * S5-185347 | * Minutes of virtual meeting on 5G restructured specifications on July 25th 2018 | * OAM&P SWG chair (Huawei) | * approved |  |  |
| * S5-185348 | * LS from BBF cc SA5 Response to 3GPP SA2 liaison S2-183036 on ‘general status of work | * BBF | * noted |  |  |
| * S5-185349 | * pCR 28.541 Update state handling of NSI | * Ericsson Limited | * revised |  | * S5-185505 |
| * S5-185350 | * pCR 28.541 State handling of NSSI | * Ericsson Limited | * revised |  | * S5-185506 |
| * S5-185351 | * pCR R16 28404-030 Indication that recording has started | * Ericsson | * revised |  | * S5-185485 |
| * S5-185352 | * pCR R16 28405-010 Activation of QoE data collection | * Ericsson | * approved |  |  |
| * S5-185353 | * pCR R16 28405-010 Handling of measurement collection at handover | * Ericsson | * approved |  |  |
| * S5-185354 | * pCR R16 28405-010 Reporting of collected data | * Ericsson | * approved |  |  |
| * S5-185355 | * Update 5G management architecture | * Huawei Telecommunication India | * revised |  | * S5-185460 |
| * S5-185356 | * Tdoc discussion sequence for WI on Assurance data and PM for 5G networks and network slicing | * Intel Corporation (UK) Ltd, China Mobile | * revised |  | * S5-185498 |
| * S5-185357 | * New SID on Self-Organizing Networks (SON) for 5G networks | * Intel Korea, Ltd. | * revised |  | * S5-185493 |
| * S5-185358 | * pCR TS 28.541 Add YANG-based SS definitions for gNB modeling | * Nokia, Nokia Shanghai Bell | * approved | * S5-185085 |  |
| * S5-185359 | * pCR TS 28.541 Add YANG-based SS definitions for 5GC modeling | * Nokia, Nokia Shanghai Bell | * revised | * S5-185088 | * S5-185490 |
| * S5-185360 | * pCR TS 28.541 Add YANG-based SS definitions for network slice modeling | * Nokia, Nokia Shanghai Bell | * revised | * S5-185091 | * S5-185491 |
| * S5-185361 | * pCR 28.xyz Change AlarmIRP to FaultSupervisionFunction | * ZTE Corporation | * revised |  | * S5-185536 |
| * S5-185362 | * pCR TS 28.xyz replace notificationIRP with notificationFunction | * ZTE Corporation | * revised |  | * S5-185538 |
| * S5-185363 | * R15 pCR 32.291 Update Resource definition and associated methods | * Nokia, Nokia Shanghai Bell | * merged |  |  |
| * S5-185364 | * pCR TS 28.541 Update XML-based 5GC NRM SS definitions to keep it aligned with IM definitions | * Nokia, Nokia Shanghai Bell | * revised | * S5-185087 | * S5-185507 |
| * S5-185365 | * Reply LS to S5-1812392 on adding measurements on average number of total active UEs (R2-1809158; to: SA5; cc: -; contact: Huawei) | * R2-1809158 | * replied to | * S5-185046 | * - |
| * S5-185366 | * CH Agenda and Time Plan | * CH SWG Chair | * agreed | * S5-185037 | * - |
| * S5-185367 | * Reply to S2-187577 = S5-185336 on Use of NRF framework by CHF for information (to: SA2, CT4; cc: CT3; contact: Ericsson) | * Ericsson | * approved | * - | * - |
| * S5-185368 | * New WID on Volume Based Charging Aspects for VoLTE | * China Mobile | * agreed | * S5-185103 | * - |
| * S5-185369 | * New WID on SMS Charging in 5G System Architecture Phase 1 | * Nokia, Nokia Shanghai Bell | * revised | * S5-185214 | * S5-185638 |
| * S5-185370 | * Rel-15 pCR 32.255 Correction on the charging characteristics | * Huawei Technologies Co. Ltd. | * approved | * S5-185109 | * - |
| * S5-185371 | * Rel-15 pCR 32.255 Correction on the Trigger | * Huawei Technologies Co. Ltd. | * approved | * S5-185113 | * - |
| * S5-185372 | * Rel-15 pCR 32.255 Addition of PCC rules and chargeable event | * Huawei Technologies Co. Ltd. | * approved | * S5-185116 | * - |
| * S5-185373 | * R15 CR 32.297 Introduce the Bd for 5G Charging | * Huawei Technologies Co. Ltd. | * agreed | * S5-185114 | * - |
| * S5-185374 | * Rel-15 pCR 32.255 Addition of Message Flow of the SSC Mode | * Huawei Technologies Co. Ltd. | * approved | * S5-185112 | * - |
| * S5-185375 | * Rel-15 pCR 32.255 Addition of General description for interworking with EPC | * Huawei Technologies Co. Ltd. | * approved | * S5-185115 | * - |
| * S5-185376 | * R15 pCR 32.255 Complete set of flows | * Nokia, Nokia Shanghai Bell | * agreed | * S5-185221 | * - |
| * S5-185377 | * R15 pCR 32.255 Introduce Network sharing (MOCN) | * Nokia, Nokia Shanghai Bell | * approved | * S5-185218 | * - |
| * S5-185378 | * R15 pCR 32.255 Clarify per UPF charging information | * Nokia, Nokia Shanghai Bell, Huawei Technologies Co. Ltd. | * approved | * S5-185220 | * - |
| * S5-185379 | * R15 pCR 32.255 Update PDU session information | * Nokia, Nokia Shanghai Bell | * approved | * S5-185222 | * - |
| * S5-185380 | * Rel-15 pCR 32.255 Update of PDU session charging information | * Huawei Technologies Co. Ltd. | * approved | * S5-185235 | * - |
| * S5-185381 | * pCR TS 32.255 Update CDR description | * Nokia, Nokia Shanghai Bell, Ericsson | * approved | * S5-185223 | * - |
| * S5-185382 | * Rel-15 CR 32.299 Introduction of AVP for Overload Control | * Ericsson | * agreed | * S5-185479 | * - |
| * S5-185383 | * R15 pCR 32.255 Clarification on Charging Data generation in case of Roaming | * Nokia, Nokia Shanghai Bell | * approved | * S5-185224 | * - |
| * S5-185384 | * R15 pCR 32.255 Clarification on Roaming flows description | * Nokia, Nokia Shanghai Bell | * approved | * S5-185225 | * - |
| * S5-185385 | * R15 pCR 32.255 Introduce CDR generation for roaming | * Nokia, Nokia Shanghai Bell | * approved | * S5-185226 | * - |
| * S5-185386 | * R15 pCR 32.255 Update PDU session charging information for roaming | * Nokia, Nokia Shanghai Bell | * approved | * S5-185227 | * - |
| * S5-185387 | * Rel-15 pCR 32.255 Detailed message format for converged charging | * Nokia, Nokia Shanghai Bell | * approved | * S5-185317 | * - |
| * S5-185388 | * Rel-15 CR 32.290 Update of Scenarios | * Huawei, Ericsson, Nokia, Nokia Shanghai Bell | * agreed | * S5-185244 | * - |
| * S5-185389 | * Rel-15 pCR 32.255 Clarification on CHF addresses | * Huawei Technologies Co. Ltd. | * withdrawn | * - | * - |
| * S5-185390 | * R15 CR 32.290 Correction on Nchf\_ConvergedCharging\_Notify Service Operation | * Huawei Technologies Co. Ltd. | * agreed | * S5-185239 | * - |
| * S5-185391 | * R15 CR 32.290 Correction on the Requirement for Converged Charging | * Huawei Technologies Co. Ltd. | * agreed | * S5-185240 | * - |
| * S5-185392 | * R15 CR 32.290 Update of Service Operation | * Huawei,Ericsson | * agreed | * S5-185241 | * - |
| * S5-185393 | * R15 CR 32.290 Introduce Use of NRF Framework | * Nokia, Nokia Shanghai Bell | * agreed | * S5-185215 | * - |
| * S5-185394 | * Rel-15 pCR 32.290 Addition of Trigger Mechanism | * Huawei Technologies Co. Ltd. | * merged | * S5-185253 | * - |
| * S5-185395 | * R15 CR 32.290 Correction on Message Content | * Huawei, Nokia, Nokia Shanghai Bell, Ericsson | * agreed | * S5-185238 | * - |
| * S5-185396 | * R15 pCR 32.291 Use of Feature negotiation | * Nokia, Nokia Shanghai Bell | * withdrawn | * - | * - |
| * S5-185397 | * Rel-15 pCR 32.291 Reference | * Huawei Technologies Co. Ltd. | * approved | * S5-185245 | * - |
| * S5-185398 | * Rel-15 pCR 32.291 Introduction error handling | * Ericsson, Huawei | * approved | * S5-185320 | * - |
| * S5-185399 | * Rel-15 pCR 32.291 Update of Resource Standard Methods | * Ericsson | * approved | * S5-185322 | * - |
| * S5-185400 | * Rel-15 pCR 32.255 Update partial CDR triggers description | * Nokia, Nokia Shanghai Bell | * approved | * S5-185315 | * - |
| * S5-185401 | * Reply LS to S5-184272 on Further Information About IETF Work Relevant to Network Slicing (IETF\_LS\_180814; to: SA5; cc: -; contact: IETF L2SM WG chairman) | * IETF | * postponed | * - | * - |
| * S5-185402 | * Draft reply to R2-1809158 = S5-185365 on adding measurements on average number of total active UEs (to: RAN2; cc: -; contact: Huawei) | * Huawei | * revised | * - | * S5-185584 |
| * S5-185403 | * Draft reply LS to R2-1810957 = S5-185047 on L2 measurement (to: RAN2; cc: RAN1, RAN3; contact: Ericsson) | * Ericsson | * revised | * - | * S5-185585 |
| * S5-185404 | * Reply to S2-187617 = S5-185051 on Data Analytics in SA WG2 NWDAF (to: SA2; cc: SA, RAN, RAN3, RAN2; contact: Huawei) | * SA5 | * approved | * - | * - |
| * S5-185405 | * Rel-16 CR 32.425 Add definition of UE active numbers related measurements | * Huawei, China Telecom | * revised | * S5-185274 | * S5-185593 |
| * S5-185406 | * pCR TS 28.533 Editorial changes to clause 4.2 and 4.4 | * NEC Corporation | * revised | * S5-185332 | * S5-185442 |
| * S5-185407 | * pCR 28.533 Edit help - remove empty clauses | * Ericsson Limited | * approved | * S5-185120 | * - |
| * S5-185408 | * pCR TS 28.533 Further clarification into clause 4.7 Management data analytics capability | * NEC Corporation, Huawei | * approved | * S5-185330 | * - |
| * S5-185409 | * pCR 28.533 Resolution of Editors notes | * Ericsson Limited | * approved | * S5-185122 | * - |
| * S5-185410 | * pCR TS 28.533 Normative architecture aspects | * Cisco Systems Inc., Deutsche Telekom | * approved | * S5-185125 | * - |
| * S5-185411 | * pCR 28.533 Include management reference model | * Ericsson Limited | * revised | * S5-185303 | * S5-185601 |
| * S5-185412 | * pCR 28.533 Exposure governance and EGMF further clarification | * Huawei | * approved | * S5-185150 | * - |
| * S5-185413 | * pCR 28.533 Update of utilization of management services in functional management architecture | * Huawei | * approved | * S5-185151 | * - |
| * S5-185414 | * Time Plan for OAM&P | * WG Vice Chair (Huawei) | * noted | * S5-185017 | * - |
| * S5-185415 | * pCR 28.531 Rapporteur clean-up proposal | * Huawei | * approved | * S5-185156 | * - |
| * S5-185416 | * pCR 28.531 Update UC/Requirement/Procedure for creation of a 3GPP NF | * DOCOMO Communications Lab. | * approved | * S5-185104 | * - |
| * S5-185417 | * pCR 28.531 Update NSSI termination uc with considering shared NSSIs | * China Unicom | * approved | * S5-185105 | * - |
| * S5-185418 | * pCR 28.531 Add procedures for communictions services using 5G network | * Huawei | * approved | * S5-185160 | * - |
| * S5-185419 | * pCR TS 28.540 Add requirements for network slice modeling | * Nokia, Nokia Shanghai Bell | * approved | * S5-185081 | * - |
| * S5-185420 | * pCR 28.540 Support mgmt of Beam-RLM and BFD monitoring & reporting in NRM definitions | * Intel Korea, Ltd. | * revised | * S5-185297 | * S5-185599 |
| * S5-185421 | * pCR Rel-15 28.541 use ExternalXyz class | * Ericsson Inc. | * approved | * S5-185062 | * - |
| * S5-185422 | * pCR Rel-15 TS 28.541 add ME class in UML diagram | * Ericsson Inc. | * approved | * S5-185061 | * - |
| * S5-185423 | * pCR TS 28.541 clean-up | * Nokia Solutions & Networks (I) | * approved | * S5-185080 | * - |
| * S5-185424 | * pCR TS 28.541 Add common notification definitions | * Nokia, Nokia Shanghai Bell | * approved | * S5-185082 | * - |
| * S5-185425 | * pCR 28.541 Clean-up of EP\_RP IOC definition | * Huawei | * approved | * S5-185164 | * - |
| * S5-185426 | * pCR 28.541 Address the consistency issue for TAC and NSSAI | * Huawei | * approved | * S5-185165 | * - |
| * S5-185427 | * Sequence proposal for management and orchestration of 5G networks and network slicing agenda point 6.4.1 | * Ericsson Limited | * revised | * S5-185345 | * S5-185447 |
| * S5-185428 | * Discussion on network slice priority | * China Telecom Corporation Ltd. | * revised | * S5-185254 | * S5-185494 |
| * S5-185429 | * New WID on energy efficiency in 5G networks | * Orange | * revised | * S5-185076 | * S5-185586 |
| * S5-185430 | * WID Intent driven management service for mobile network | * Huawei | * revised | * S5-185138 | * S5-185587 |
| * S5-185431 | * New WID on Enhancement of performance assurance | * China Mobile, Intel Corporation (UK) Ltd | * revised | * S5-185212 | * S5-185588 |
| * S5-185432 | * New WID on OAM aspects of LTE and WLAN integration | * Intel Corporation (UK) Ltd | * revised | * S5-185213 | * S5-185589 |
| * S5-185433 | * pCR 28.531 Add operations for provisioning management service | * Huawei | * approved | * S5-185343 | * - |
| * S5-185434 | * Draft reply LS to GSMA\_LS = S5-185042 on Publication of new paper on network slicing and future plans (to: GSMA NEST; cc: -; contact: Ericsson) | * SA5 chairman (Ericsson) | * withdrawn | * - | * - |
| * S5-185435 | * New WID network policy management for mobile networks based on NFV scenarios | * China Mobile (Suzhou) Software | * revised | * S5-185255 | * S5-185590 |
| * S5-185436 | * pCR to TS 32.158 Editorial clean-up | * Nokia | * approved | * - | * - |
| * S5-185437 | * Presentation Sheet of TS 32.158 for approval | * Nokia | * approved | * - | * - |
| * S5-185438 | * TS 32.158 v1.2.0 | * Nokia | * approved | * - | * - |
| * S5-185439 | * SID for service management | * Ericsson Limited | * revised | * S5-185300 | * S5-185617 |
| * S5-185440 | * Presentation of TS 28.554 | * China Mobile | * revised | * - | * S5-185559 |
| * S5-185441 | * pCR 28.545 Update fault supervision management services components | * Huawei, ZTE Corporation | * approved | * S5-185169 | * - |
| * S5-185442 | * pCR TS 28.533 Editorial changes to clause 4.2 and 4.4 | * NEC Corporation | * approved | * S5-185406 | * - |
| * S5-185443 | * pCR 28.545 Add abbreviations | * ZTE Corporation | * approved | * S5-185269 | * - |
| * S5-185444 | * pCR 28.545 Procedures for alarm subscription supervision and notification | * Huawei | * approved | * S5-185170 | * - |
| * S5-185445 | * pCR 28.533 Update list of abbreviations | * Ericsson Limited | * approved | * S5-185123 | * - |
| * S5-185446 | * pCR 28.xyz Add stage 3 content for fault supervision | * Nokia Germany, China Mobile, ZTE, Huawei | * revised | * S5-185308 | * S5-185602 |
| * S5-185447 | * Sequence proposal for management and orchestration of 5G networks and network slicing agenda point 6.4.1 | * Ericsson Limited | * revised | * S5-185427 | * S5-185489 |
| * S5-185448 | * pCR 28.531 add the related operation in procedures | * HuaWei Technologies Co., Ltd | * approved | * S5-185335 | * - |
| * S5-185449 | * Revised WID on Performance assurance for 5G networks including network slicing | * Intel Corporation (UK) Ltd, China Mobile | * agreed | * S5-185210 | * - |
| * S5-185450 | * pCR TS 28.551 createMeasurementJob clarification | * Cisco Systems Inc. | * approved | * S5-185129 | * - |
| * S5-185451 | * Reply LS to S5-182574, S5-193622, S5-184337 on L2 measurements (R3-185114; to: SA5, RAN2; cc: -; contact: Ericsson) | * R3-185114 | * replied to | * - | * - |
| * S5-185452 | * pCR 28.550 Update on MDAS | * Huawei | * approved | * S5-185172 | * - |
| * S5-185453 | * pCR 28.550 Add detectCoverageHole operation for MDAS CCO service | * Huawei | * withdrawn | * S5-185173 | * - |
| * S5-185454 | * pCR 28.552 Add concept for assurance data | * Intel Corporation (UK) Ltd, China Mobile | * withdrawn | * S5-185206 | * - |
| * S5-185455 | * SID Study on 5G network and network slicing tenant management | * Huawei | * agreed | * S5-185137 | * - |
| * S5-185456 | * OAM&P SWG action list | * WG Vice Chair (Huawei) | * noted | * S5-185019 | * - |
| * S5-185457 | * pCR 28.552 Add registration procedure related measurements for AMF | * Intel Corporation (UK) Ltd; China Mobile (Suzhou) Software | * approved | * S5-185198 | * - |
| * S5-185458 | * Add a procedure to associate an VNF instance with a VNF profile | * Intel Korea, Ltd. | * not pursued | * S5-185189 | * - |
| * S5-185459 | * Add a procedure to associate an PNF with a PNF profile | * Intel Korea, Ltd. | * not pursued | * S5-185190 | * - |
| * S5-185460 | * Update 5G management architecture | * Huawei Telecommunication India | * not pursued | * S5-185355 | * - |
| * S5-185461 | * Rel-15 CR Changes for EPC CUPS in E-UTRAN NRM | * Huawei | * agreed | * S5-185176 | * - |
| * S5-185462 | * CR 28.708 IS NRM IOC changes for EPC CUPS | * Huawei | * revised | * S5-185177 | * S5-185612 |
| * S5-185463 | * Rel-15 CR 32.426 Addition of PFCP session management measurements | * Huawei | * revised | * S5-185178 | * S5-185613 |
| * S5-185464 | * Rel-15 pCR 32.255 Introduce CHF selection | * Nokia, Nokia Shanghai Bell | * approved | * S5-185316 | * - |
| * S5-185465 | * Rel-15 pCR 32.291 Update of Bindings | * Huawei Technologies Co. Ltd. | * approved | * S5-185249 | * - |
| * S5-185466 | * Rel-15 pCR 32.291 Update of Data Model | * Huawei Technologies, Nokia, Nokia Shanghai Bell | * approved | * S5-185250 | * - |
| * S5-185467 | * R15 pCR 32.291 Introduce New data types for roaming QBC | * Nokia, Nokia Shanghai Bell | * approved | * S5-185334 | * - |
| * S5-185468 | * Rel-15 pCR 32.291 Open API | * Huawei Technologies Co. Ltd. | * approved | * S5-185252 | * - |
| * S5-185469 | * Rel-15 CR 32.298 Introduction of CHF-CDR | * Ericsson | * agreed | * S5-185313 | * - |
| * S5-185470 | * R15 CR 32.298 Introduce new Charging Function record type | * Nokia, Nokia Shanghai Bell | * agreed | * S5-185333 | * - |
| * S5-185471 | * R15 CR 32.298 Upgrade ASN1 modules version | * Nokia, Nokia Shanghai Bell | * agreed | * S5-185337 | * - |
| * S5-185472 | * Rel-15 CR 32.298 Addition of DataVolumeOctets in generic CDR part | * Ericsson | * agreed | * S5-185314 | * - |
| * S5-185473 | * Rel-15 CR 32.240 High level overall charging architecture | * Vodafone | * agreed | * S5-185341 | * - |
| * S5-185474 | * TS 32.291 v0.5.0 | * Huawei | * approved | * - | * - |
| * S5-185475 | * TS 32.291 cover sheet approval | * Huawei | * approved | * - | * - |
| * S5-185476 | * TS 32.255 v1.2.0 | * Nokia | * approved | * - | * - |
| * S5-185477 | * TS 32.255 cover sheet approval | * Nokia | * approved | * - | * - |
| * S5-185478 | * Rel-15 CR 32.299 Introduction of reporting and reacting overload handling | * Ericsson | * agreed | * S5-185309 | * - |
| * S5-185479 | * Rel-15 CR 32.299 Introduction of AVP for Overload Control | * Ericsson | * revised | * S5-185310 | * S5-185382 |
| * S5-185480 | * Rel-15 CR 32.299 Introduction of overload AVP description | * Ericsson | * agreed | * S5-185311 | * - |
| * S5-185481 | * Rel-15 CR 32.298 Add Charging-ID to RAN Secondary RAT Usage Report | * Ericsson | * agreed | * S5-185306 | * - |
| * S5-185482 | * Rel-15 CR 32.299 Add Charging-ID to RAN Secondary RAT Usage Report | * Ericsson | * agreed | * S5-185307 | * - |
| * S5-185483 | * Exception sheet WID on SMS Charging in 5G System Architecture Phase 1 | * Nokia, Nokia Shanghai Bell | * agreed | * - | * - |
| * S5-185484 | * CR 28.709 SS XML Definition EPC CUPS | * Huawei | * agreed | * S5-185179 | * - |
| * S5-185485 | * pCR R16 28404-030 Indication that recording has started | * Ericsson | * approved | * S5-185351 | * - |
| * S5-185486 | * pCR 28.533 Update type C definition to include CM | * Ericsson Limited | * approved | * S5-185302 | * - |
| * S5-185487 | * pCR 28.533 Update style of code for Figure 4.6.2 | * Ericsson Limited | * approved | * S5-185124 | * - |
| * S5-185488 | * pCR 28.530 Clean-up proposal | * Huawei, NEC | * approved | * S5-185147 | * - |
| * S5-185489 | * Sequence proposal for management and orchestration of 5G networks and network slicing agenda point 6.4.1 | * Ericsson Limited | * revised | * S5-185447 | * S5-185529 |
| * S5-185490 | * pCR TS 28.541 Add YANG-based SS definitions for 5GC modeling | * Nokia, Nokia Shanghai Bell | * approved | * S5-185359 | * - |
| * S5-185491 | * pCR TS 28.541 Add YANG-based SS definitions for network slice modeling | * Nokia, Nokia Shanghai Bell | * revised | * S5-185360 | * S5-185532 |
| * S5-185492 | * WID Methodology for 5G management specifications | * Ericsson Limited | * revised | * S5-185338 | * S5-185591 |
| * S5-185493 | * New SID on Self-Organizing Networks (SON) for 5G networks | * Intel Korea, Ltd. | * revised | * S5-185357 | * S5-185592 |
| * S5-185494 | * Discussion on network slice priority | * China Telecom Corporation Ltd. | * revised | * S5-185428 | * S5-185607 |
| * S5-185495 | * pCR 28.531 Update Interface for provisioning of network and network slicing with notifications | * Huawei | * approved | * S5-185159 | * - |
| * S5-185496 | * pCR 28.531 NSD parameterization for NSSI allocation | * Huawei | * approved | * S5-185148 | * - |
| * S5-185497 | * pCR 28.531 Insert connection to definitions in 28.530 | * Ericsson Limited | * approved | * S5-185344 | * - |
| * S5-185498 | * Tdoc discussion sequence for WI on Assurance data and PM for 5G networks and network slicing | * China Mobile, Intel Corporation (UK) Ltd | * noted | * S5-185356 | * - |
| * S5-185499 | * pCR Rel-15 TS 28541 Cell BWP model fragment | * Ericsson Inc. | * approved | * S5-185065 | * - |
| * S5-185500 | * pCR 28.541 Add Info Model definitions for NRCellDU SpatialDomainFilter | * Pivotal Commware, Intel Korea, Ltd. | * postponed | * S5-185298 | * - |
| * S5-185501 | * pCR 28.541 Update Network Slice Class diagram | * Huawei | * approved | * S5-185166 | * - |
| * S5-185502 | * pCR 28.541 Clean-up information model for network slice | * Huawei | * approved | * S5-185163 | * - |
| * S5-185503 | * pCR TS 28.541 RRM Policy | * Cisco Systems Inc., Deutsche Telekom | * approved | * S5-185130 | * - |
| * S5-185504 | * Add attributes for network slice capacity planning | * ETRI | * not pursued | * S5-185132 | * - |
| * S5-185505 | * pCR 28.541 Update state handling of NSI | * Ericsson Limited | * approved | * S5-185349 | * - |
| * S5-185506 | * pCR 28.541 State handling of NSSI | * Ericsson Limited | * approved | * S5-185350 | * - |
| * S5-185507 | * pCR TS 28.541 Update XML-based 5GC NRM SS definitions to keep it aligned with IM definitions | * Nokia, Nokia Shanghai Bell | * approved | * S5-185364 | * - |
| * S5-185508 | * pCR TS 28.541 Update XML-based NR NRM SS definitions to keep it aligned with IM definitions | * Nokia, Nokia Shanghai Bell | * approved | * S5-185084 | * - |
| * S5-185509 | * 5G management specification titles | * SA5 OAM SWG chairman (Huawei) | * revised | * - | * S5-185524 |
| * S5-185510 | * pCR 28.554 Add management data analytical KPIs on RAN condition | * Intel Korea, Ltd. | * withdrawn | * S5-185187 | * - |
| * S5-185511 | * pCR 28.554 Add management data analytical KPIs on cell composite load | * Intel Korea, Ltd. | * withdrawn | * S5-185188 | * - |
| * S5-185512 | * pCR 28.550 Add Restful SS for performance assurance services | * Intel Corporation (UK) Ltd | * approved | * S5-185193 | * - |
| * S5-185513 | * pCR TS 28.550 Further clarification relating to the definifition of management Analytical KPI(s) | * NEC Corporation | * approved | * S5-185331 | * - |
| * S5-185514 | * pCR 28.550 alignment of terminology | * Intel Corporation (UK) Ltd | * approved | * S5-185195 | * - |
| * S5-185515 | * pCR 28.552 Add AM policy association establishment related measurements for PCF | * Intel Corporation (UK) Ltd | * approved | * S5-185200 | * - |
| * S5-185516 | * pCR 28.552 Add event exposure related measurements for NEF | * Intel Corporation (UK) Ltd | * revised | * S5-185202 | * S5-185608 |
| * S5-185517 | * pCR 28.552 Add NF service registration related measurements for NRF | * Intel Corporation (UK) Ltd | * not pursued | * S5-185203 | * - |
| * S5-185518 | * pCR 28.552 Add NF performance measurements related to VR | * Intel Corporation (UK) Ltd | * not pursued | * S5-185204 | * - |
| * S5-185519 | * pCR TS 28.553 Add measurement of registration subscribers | * China Mobile (Suzhou) Software | * approved | * - | * - |
| * S5-185520 | * pCR 28.552 Scope and References update | * Ericsson GmbH, Eurolab | * approved | * S5-185284 | * - |
| * S5-185521 | * pCR 28.552 Add definitions | * Ericsson GmbH, Eurolab | * revised | * S5-185285 | * S5-185609 |
| * S5-185522 | * pCR 28.552 Rapporteur clean-up | * Intel Corporation (UK) Ltd | * approved | * S5-185207 | * - |
| * S5-185523 | * pCR 28.552 IP Latency measurement update | * Ericsson GmbH, Eurolab | * approved | * S5-185286 | * - |
| * S5-185524 | * 5G management specification titles | * SA5 OAM SWG chairman (Huawei) | * endorsed | * S5-185509 | * - |
| * S5-185525 | * Presentation sheet for 28.530 | * Huawei | * approved | * S5-185154 | * - |
| * S5-185526 | * pCR 28.xyz Add notifications for provisioning management service | * Huawei | * revised | * S5-185140 | * S5-185596 |
| * S5-185527 | * pCR 28.xyz Add common subscribe management service | * Huawei | * approved | * S5-185141 | * - |
| * S5-185528 | * pCR 28.xyz Add specification level requirements for provisioning | * Huawei | * approved | * S5-185142 | * - |
| * S5-185529 | * Sequence proposal for management and orchestration of 5G networks and network slicing agenda point 6.4.1 | * Ericsson Limited | * noted | * S5-185489 | * - |
| * S5-185530 | * pCR TS 28.541 Add XML-based SS definitions for network slice modeling | * Nokia, Nokia Shanghai Bell | * approved | * S5-185090 | * - |
| * S5-185531 | * YANG model restructuring | * Ericsson | * noted | * - | * - |
| * S5-185532 | * pCR TS 28.541 Add YANG-based SS definitions for network slice modeling | * Nokia, Nokia Shanghai Bell | * approved | * S5-185491 | * - |
| * S5-185533 | * pCR 28.541 Update list of abbreviations | * Ericsson Japan K.K. | * approved | * S5-185327 | * - |
| * S5-185534 | * CR 28.658 Update E-UTRAN IS definitions to support ng-eNB management | * Nokia, Nokia Shanghai Bell | * revised | * S5-185094 | * S5-185605 |
| * S5-185535 | * pCR 28.xyz Add RESTful HTTP-based solution set of notifyprovisioning | * Huawei | * approved | * S5-185145 | * - |
| * S5-185536 | * pCR 28.xyz Change AlarmIRP to FaultSupervisionFunction | * ZTE Corporation | * revised | * S5-185361 | * S5-185598 |
| * S5-185537 | * pCR 28.550 Add performance data file XML schema | * Intel Corporation (UK) Ltd | * revised | * S5-185194 | * S5-185620 |
| * S5-185538 | * pCR TS 28.xyz replace notificationIRP with notificationFunction | * ZTE Corporation | * approved | * S5-185362 | * - |
| * S5-185539 | * Revised WID Management and orchestration of 5G networks and network slicing Rev marks | * Ericsson Limited | * agreed | * S5-185078 | * - |
| * S5-185540 | * Discussion sequence for Management aspects of edge computing | * Intel | * endorsed | * - | * - |
| * S5-185541 | * pCR 28.552 Number of UE Context Release Request measurements update | * Ericsson GmbH, Eurolab | * approved | * S5-185287 | * - |
| * S5-185542 | * Void | * Charging SWG | * withdrawn | * - | * - |
| * S5-185543 | * Void | * Charging SWG | * withdrawn | * - | * - |
| * S5-185544 | * Void | * Charging SWG | * withdrawn | * - | * - |
| * S5-185545 | * Void | * Charging SWG | * withdrawn | * - | * - |
| * S5-185546 | * Void | * Charging SWG | * withdrawn | * - | * - |
| * S5-185547 | * pCR 28.552 Packet Delay measurements update | * Ericsson GmbH, Eurolab | * approved | * S5-185288 | * - |
| * S5-185548 | * pCR 28.552 Packet drop measurements update | * Ericsson GmbH, Eurolab | * approved | * S5-185289 | * - |
| * S5-185549 | * pCR 28.552 Packet loss measurements corrections and update | * Ericsson GmbH, Eurolab | * approved | * S5-185290 | * - |
| * S5-185550 | * pCR 28.552 RRC connection number measurements update | * Ericsson GmbH, Eurolab | * approved | * S5-185292 | * - |
| * S5-185551 | * pCR 28.552 UE throughput measurements update | * Ericsson GmbH, Eurolab | * approved | * S5-185293 | * - |
| * S5-185552 | * Presentation of TS 28.552 for approval | * Intel Corporation (UK) Ltd | * revised | * S5-185209 | * S5-185611 |
| * S5-185553 | * Reply to ITU-T SG2 LS63 = S5-185053 on methodology harmonization (to: ITU-T SG2; cc: -; contact: Ericsson) | * Ericsson | * approved | * - | * - |
| * S5-185554 | * pCR 28.554 Add KPI definition of registered subscribers to UDM of single network slice instance | * China Mobile (Suzhou) Software | * approved | * S5-185259 | * - |
| * S5-185555 | * Revised WID on Fault supervision for 5G network and network slicing | * ZTE Corporation | * approved | * S5-185079 | * - |
| * S5-185556 | * Presentation of TS.28.545 to SA for approval | * ZTE Corporation | * approved | * S5-185277 | * - |
| * S5-185557 | * pCR 28.554 RAN UE Throughput KPI update | * Ericsson GmbH, Eurolab | * approved | * S5-185281 | * - |
| * S5-185558 | * pCR Delete editor’s notes in TS 28.554 | * China Mobile (Suzhou) Software | * approved | * S5-185262 | * - |
| * S5-185559 | * Presentation of TS 28.554 | * China Mobile | * approved | * S5-185440 | * - |
| * S5-185560 | * Reply to R3-185114 = S5-185451 on L2 measurement (to: RAN3; cc: RAN1, RAN2; contact: Ericsson) | * SA5 | * approved | * - | * - |
| * S5-185561 | * Presentation of TS 28.550 for approval | * Intel Corporation (UK) Ltd | * approved | * S5-185208 | * - |
| * S5-185562 | * TD PM Control | * Ericsson Inc. | * noted | * S5-185058 | * - |
| * S5-185563 | * pCR 28.xyz Add RESTful HTTP-based solution set of common subscribe and unsubscribe | * HuaWei Technologies Co., Ltd | * revised | * S5-185236 | * S5-185597 |
| * S5-185564 | * Revised WID Provisioning of 5G networks and network slicing | * Huawei | * agreed | * S5-185161 | * - |
| * S5-185565 | * Presentation of TS 28.531 to SA for Approval | * Huawei | * approved | * S5-185264 | * - |
| * S5-185566 | * pCR TR 32.972 – Potential use cases and requirements | * Orange | * withdrawn | * S5-185073 | * - |
| * S5-185567 | * pCR TR 32.972 - Add conclusion | * Orange | * approved | * S5-185074 | * - |
| * S5-185568 | * Revised SID on System and functional aspects of Energy Efficiency in 5G networks | * Orange | * agreed | * S5-185075 | * - |
| * S5-185569 | * pCR TR 28.900 – Update clause 5 with 5G network management principles | * AT&T, Orange | * approved | * S5-185069 | * - |
| * S5-185570 | * pCR 28.550 Add concept for performance assurance | * Intel Corporation (UK) Ltd, China Mobile | * revised | * S5-185191 | * S5-185606 |
| * S5-185571 | * pCR 28.900 – Update clause 6.4 with 5G network management principles | * AT&T, Orange | * approved | * S5-185072 | * - |
| * S5-185572 | * pCR 28.900 Potential positioning of ONAP/DCAE wrt. for 3GPP management services | * Huawei | * approved | * S5-185180 | * - |
| * S5-185573 | * pCR 28.900 Correct ONAP architecture overview | * Ericsson Japan K.K. | * approved | * S5-185294 | * - |
| * S5-185574 | * pCR TR 28.900 – Scope input | * AT&T GNS Belgium SPRL, Orange | * approved | * S5-185319 | * - |
| * S5-185575 | * pCR 28.900 Update list of abbreviations | * Ericsson Japan K.K. | * approved | * S5-185325 | * - |
| * S5-185576 | * pCR 28.900 Add comparison of used technologies | * Ericsson Japan K.K. | * approved | * S5-185328 | * - |
| * S5-185577 | * pCR 28.900 Potential positioning of APPC wrt. for 3GPP management services | * Huawei | * approved | * S5-185181 | * - |
| * S5-185578 | * pCR 28.803 add table of content | * Intel Korea, Ltd. | * approved | * S5-185182 | * - |
| * S5-185579 | * pCR 28.803 add scope | * Intel Korea, Ltd. | * approved | * S5-185183 | * - |
| * S5-185580 | * pCR 28.803 add concept of edge computing management | * Intel Korea, Ltd. | * revised | * S5-185184 | * S5-185614 |
| * S5-185581 | * pCR 28.803 add use cases for UPF and AS location retrieval | * Intel Korea, Ltd. | * withdrawn | * S5-185185 | * - |
| * S5-185582 | * TS 28.532 v0.5.0 | * Huawei | * agreed | * - | * - |
| * S5-185583 | * Presentation of TR 32.972 to SA for information | * Orange | * approved | * - | * - |
| * S5-185584 | * Draft reply to R2-1809158 = S5-185365 on adding measurements on average number of total active UEs (to: RAN2; cc: -; contact: Huawei) | * Huawei | * revised | * S5-185402 | * S5-185594 |
| * S5-185585 | * Reply LS to R2-1810957 = S5-185047 on L2 measurement (to: RAN2; cc: RAN1, RAN3; contact: Ericsson) | * SA5 | * approved | * S5-185403 | * - |
| * S5-185586 | * New WID on energy efficiency in 5G networks | * Orange | * agreed | * S5-185429 | * - |
| * S5-185587 | * WID Intent driven management service for mobile network | * Huawei | * revised | * S5-185430 | * S5-185603 |
| * S5-185588 | * New WID on Enhancement of performance assurance | * China Mobile, Intel Corporation (UK) Ltd | * revised | * S5-185431 | * S5-185616 |
| * S5-185589 | * New WID on OAM aspects of LTE and WLAN integration | * Intel Corporation (UK) Ltd | * agreed | * S5-185432 | * - |
| * S5-185590 | * New WID network policy management for mobile networks based on NFV scenarios | * China Mobile (Suzhou) Software | * agreed | * S5-185435 | * - |
| * S5-185591 | * WID Methodology for 5G management specifications | * Ericsson Limited | * agreed | * S5-185492 | * - |
| * S5-185592 | * New SID on Self-Organizing Networks (SON) for 5G networks | * Intel Korea, Ltd. | * revised | * S5-185493 | * S5-185618 |
| * S5-185593 | * Rel-16 CR 32.425 Add definition of UE active numbers related measurements | * Huawei, China Telecom | * agreed | * S5-185405 | * - |
| * S5-185594 | * Reply to R2-1809158 = S5-185365 on adding measurements on average number of total active UEs (to: RAN2; cc: -; contact: Huawei) | * SA5 | * approved | * S5-185584 | * - |
| * S5-185595 | * R15 CR 28.701 Align terminology | * Ericsson Japan K.K. | * agreed | * S5-185324 | * - |
| * S5-185596 | * pCR 28.xyz Add notifications for provisioning management service | * Huawei | * not pursued | * S5-185526 | * - |
| * S5-185597 | * pCR 28.xyz Add RESTful HTTP-based solution set of common subscribe and unsubscribe | * HuaWei Technologies Co., Ltd | * approved | * S5-185563 | * - |
| * S5-185598 | * pCR 28.xyz Change AlarmIRP to FaultSupervisionFunction | * ZTE Corporation | * approved | * S5-185536 | * - |
| * S5-185599 | * pCR 28.540 Support mgmt of Beam-RLM and BFD monitoring & reporting in NRM definitions | * Intel Korea, Ltd. | * revised | * S5-185420 | * S5-185619 |
| * S5-185600 | * Presentation of TS 28.540 for approval | * Nokia, Nokia Shanghai Bell | * approved | * S5-185097 | * - |
| * S5-185601 | * pCR 28.533 Include management reference model | * Ericsson Limited | * approved | * S5-185411 | * - |
| * S5-185602 | * pCR 28.xyz Add stage 3 content for fault supervision | * Nokia Germany, China Mobile, ZTE, Huawei | * approved | * S5-185446 | * - |
| * S5-185603 | * WID Intent driven management service for mobile network | * Huawei | * revised | * S5-185587 | * S5-185610 |
| * S5-185604 | * Presentation of TS 28.541 for approval | * Nokia, Nokia Shanghai Bell | * approved | * S5-185098 | * - |
| * S5-185605 | * CR 28.658 Update E-UTRAN IS definitions to support ng-eNB management | * Nokia, Nokia Shanghai Bell | * agreed | * S5-185534 | * - |
| * S5-185606 | * pCR 28.550 Add concept for performance assurance | * Intel Corporation (UK) Ltd, China Mobile | * withdrawn | * S5-185570 | * - |
| * S5-185607 | * Discussion on network slice priority | * China Telecom Corporation Ltd. | * noted | * S5-185494 | * - |
| * S5-185608 | * pCR 28.552 Add event exposure related measurements for NEF | * Intel Corporation (UK) Ltd | * withdrawn | * S5-185516 | * - |
| * S5-185609 | * pCR 28.552 Add definitions | * Ericsson GmbH, Eurolab | * revised | * S5-185521 | * S5-185615 |
| * S5-185610 | * WID Intent driven management service for mobile network | * Huawei | * agreed | * S5-185603 | * - |
| * S5-185611 | * Presentation of TS 28.552 for approval | * Intel Corporation (UK) Ltd | * approved | * S5-185552 | * - |
| * S5-185612 | * CR 28.708 IS NRM IOC changes for EPC CUPS | * Huawei | * agreed | * S5-185462 | * - |
| * S5-185613 | * Rel-15 CR 32.426 Addition of PFCP session management measurements | * Huawei | * agreed | * S5-185463 | * - |
| * S5-185614 | * pCR 28.803 add concept of edge computing management | * Intel Korea, Ltd. | * approved | * S5-185580 | * - |
| * S5-185615 | * pCR 28.552 Add definitions | * Ericsson GmbH, Eurolab | * approved | * S5-185609 | * - |
| * S5-185616 | * New WID on Enhancement of performance assurance | * China Mobile, Intel Corporation (UK) Ltd | * agreed | * S5-185588 | * - |
| * S5-185617 | * SID for service management | * Ericsson Limited | * revised | * S5-185439 | * S5-185639 |
| * S5-185618 | * New SID on Self-Organizing Networks (SON) for 5G networks | * Intel Korea, Ltd. | * revised | * S5-185592 | * S5-185642 |
| * S5-185619 | * pCR 28.540 Support mgmt of Beam-RLM and BFD monitoring & reporting in NRM definitions | * Intel Korea, Ltd. | * not pursued | * S5-185599 | * - |
| * S5-185620 | * pCR 28.550 Add performance data file XML schema | * Intel Corporation (UK) Ltd | * approved | * S5-185537 | * - |
| * S5-185621 | * Presentation of TS 28.533 to SA for information and approval | * Ericsson Limited | * approved | * S5-185117 | * - |
| * S5-185622 | * TS 28.530 v1.3.0 | * Huawei | * approved | * - | * - |
| * S5-185623 | * TS 28.532 v0.6.0 | * Huawei | * approved | * - | * - |
| * S5-185624 | * TS 28.533 v0.6.0 | * Ericsson | * approved | * - | * - |
| * S5-185625 | * TS 28.531 v1.3.0 | * Huawei | * approved | * - | * - |
| * S5-185626 | * TS 28.540 v1.2.0 | * Nokia | * approved | * - | * - |
| * S5-185627 | * TS 28.541 v1.2.0 | * Nokia | * approved | * - | * - |
| * S5-185628 | * TS 28.545 v0.6.0 | * ZTE | * approved | * - | * - |
| * S5-185629 | * TS 28.550 v1.3.0 | * Intel | * approved | * - | * - |
| * S5-185630 | * TS 28.552 v0.6.0 | * Intel | * approved | * - | * - |
| * S5-185631 | * TS 28.554 v1.3.0 | * CMCC | * approved | * - | * - |
| * S5-185632 | * TR 28.900 v0.5.0 | * Orange | * approved | * - | * - |
| * S5-185633 | * TR 32.972 v0.6.0 | * Orange | * approved | * - | * - |
| * S5-185634 | * TS 28.404 v0.4.0 | * Ericsson | * approved | * - | * - |
| * S5-185635 | * TS 28.405 v0.2.0 | * Ericsson | * approved | * - | * - |
| * S5-185636 | * TR 28.803 v0.1.0 | * Intel | * approved | * - | * - |
| * S5-185637 | * CH Executive Report | * CH SWG Chair | * noted | * S5-185038 | * - |
| * S5-185638 | * New WID on SMS Charging in 5G System Architecture Phase 1 | * Nokia, Nokia Shanghai Bell | * agreed | * S5-185369 | * - |
| * S5-185639 | * SID for service management | * Ericsson Limited | * agreed | * S5-185617 | * - |
| * S5-185640 | * Minutes of Study on management aspects of edge computing | * Rapporteur (Intel) | * noted | * S5-185036 | * - |
| * S5-185641 | * OAM Executive Report | * WG Vice Chair (Huawei) | * noted | * S5-185018 | * - |
| * S5-185642 | * New SID on Self-Organizing Networks (SON) for 5G networks | * Intel Korea, Ltd. | * agreed | * S5-185618 | * - |

## Annex B: List of change requests

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Document | Title | Source | Spec | CR | Rev | Rel | Cat | WI | Decision |
| * S5-185355 | * Update 5G management architecture | * Huawei Telecommunication India | * 28.500 | * 0005 | * - | * Rel-15 | * B | * NETSLICE-MNFV5G | * revised |
| * S5-185460 | * Update 5G management architecture | * Huawei Telecommunication India | * 28.500 | * 0005 | * 1 | * Rel-15 | * B | * NETSLICE-MNFV5G | * not pursued |
| * S5-185189 | * Add a procedure to associate an VNF instance with a VNF profile | * Intel Korea, Ltd. | * 28.526 | * 0012 | * - | * Rel-15 | * F | * OAM14-MAMO\_VNF-LCM | * revised |
| * S5-185458 | * Add a procedure to associate an VNF instance with a VNF profile | * Intel Korea, Ltd. | * 28.526 | * 0012 | * 1 | * Rel-15 | * F | * OAM14-MAMO\_VNF-LCM | * not pursued |
| * S5-185190 | * Add a procedure to associate an PNF with a PNF profile | * Intel Korea, Ltd. | * 28.526 | * 0013 | * - | * Rel-15 | * F | * OAM14-MAMO\_VNF-LCM | * revised |
| * S5-185459 | * Add a procedure to associate an PNF with a PNF profile | * Intel Korea, Ltd. | * 28.526 | * 0013 | * 1 | * Rel-15 | * F | * OAM14-MAMO\_VNF-LCM | * not pursued |
| * S5-185093 | * CR 28.657 Add requirement to support ng-eNB management | * Nokia, Nokia Shanghai Bell | * 28.657 | * 0008 | * - | * Rel-15 | * B | * NETSLICE-5GNRM | * agreed |
| * S5-185094 | * CR 28.658 Update E-UTRAN IS definitions to support ng-eNB management | * Nokia, Nokia Shanghai Bell | * 28.658 | * 0028 | * - | * Rel-15 | * B | * NETSLICE-5GNRM | * revised |
| * S5-185534 | * CR 28.658 Update E-UTRAN IS definitions to support ng-eNB management | * Nokia, Nokia Shanghai Bell | * 28.658 | * 0028 | * 1 | * Rel-15 | * B | * NETSLICE-5GNRM | * revised |
| * S5-185605 | * CR 28.658 Update E-UTRAN IS definitions to support ng-eNB management | * Nokia, Nokia Shanghai Bell | * 28.658 | * 0028 | * 2 | * Rel-15 | * B | * NETSLICE-5GNRM | * agreed |
| * S5-185095 | * CR 28.659 Update E-UTRAN SS definitions to support ng-eNB management | * Nokia, Nokia Shanghai Bell | * 28.658 | * 0029 | * - | * Rel-15 | * B | * NETSLICE-5GNRM | * withdrawn |
| * S5-185176 | * Rel-15 CR Changes for EPC CUPS in E-UTRAN NRM | * Huawei | * 28.658 | * 0030 | * - | * Rel-15 | * B | * ME\_CUPS | * revised |
| * S5-185461 | * Rel-15 CR Changes for EPC CUPS in E-UTRAN NRM | * Huawei | * 28.658 | * 0030 | * 1 | * Rel-15 | * B | * ME\_CUPS | * agreed |
| * S5-185299 | * R15 CR 28658 Wrong terminology | * Ericsson Japan K.K. | * 28.658 | * 0031 | * - | * Rel-15 | * F | * TEI15 | * agreed |
| * S5-185092 | * CR 28.659 Update E-UTRAN SS definitions to support EN-DC management | * Nokia, Nokia Shanghai Bell | * 28.659 | * 0024 | * - | * Rel-15 | * B | * NETSLICE-5GNRM | * withdrawn |
| * S5-185295 | * Rel-15 CR 28.659 Update E-UTRAN SS definitions to support ng-eNB management | * Nokia, Nokia Shanghai Bell | * 28.659 | * 0025 | * - | * Rel-15 | * B | * NETSLICE-5GNRM | * agreed |
| * S5-185324 | * R15 CR 28.701 Align terminology | * Ericsson Japan K.K. | * 28.701 | * 0006 | * - | * Rel-15 | * F | * TEI15 | * revised |
| * S5-185595 | * R15 CR 28.701 Align terminology | * Ericsson Japan K.K. | * 28.701 | * 0006 | * 1 | * Rel-15 | * F | * TEI15 | * agreed |
| * S5-185462 | * CR 28.708 IS NRM IOC changes for EPC CUPS | * Huawei | * 28.708 | * 0008 | * - | * Rel-15 | * B | * ME\_CUPS | * revised |
| * S5-185612 | * CR 28.708 IS NRM IOC changes for EPC CUPS | * Huawei | * 28.708 | * 0008 | * 1 | * Rel-15 | * B | * ME\_CUPS | * agreed |
| * S5-185096 | * CR 28.709 Update EPC SS definitions to support management of EN-DC and 5G interworking | * Nokia, Nokia Shanghai Bell | * 28.709 | * 0010 | * - | * Rel-15 | * B | * NETSLICE-5GNRM | * agreed |
| * S5-185179 | * CR 28.709 SS XML Definition EPC CUPS | * Huawei | * 28.709 | * 0011 | * - | * Rel-15 | * B | * ME\_CUPS | * revised |
| * S5-185484 | * CR 28.709 SS XML Definition EPC CUPS | * Huawei | * 28.709 | * 0011 | * 1 | * Rel-15 | * B | * ME\_CUPS | * agreed |
| * S5-185134 | * SBI to Diameter Interworking | * Vodafone Group Plc | * 32.240 | * 0405 | * - | * Rel-15 | * B | * 5GS\_Ph1-DCH | * merged |
| * S5-185135 | * SBI to Diameter interworking introduction | * Vodafone Group Plc | * 32.240 | * 0406 | * - | * Rel-15 | * B | * 5GS\_Ph1-DCH | * merged |
| * S5-185341 | * Rel-15 CR 32.240 Diameter to SBI interworking | * Ericsson | * 32.240 | * 0407 | * - | * Rel-15 | * B | * 5GS\_Ph1-DCH | * revised |
| * S5-185473 | * Rel-15 CR 32.240 High level overall charging architecture | * Vodafone | * 32.240 | * 0407 | * 1 | * Rel-15 | * B | * 5GS\_Ph1-DCH | * agreed |
| * S5-185108 | * R15 CR 32.290 Update to support offline charging deployment | * Huawei Technologies Co. Ltd. | * 32.290 | * 0001 | * - | * Rel-15 | * B | * 5GS\_Ph1-SBI\_CH | * not pursued |
| * S5-185110 | * R15 CR 32.290 Charging Session Definition | * Huawei Technologies Co. Ltd. | * 32.290 | * 0002 | * - | * Rel-15 | * B | * 5GS\_Ph1-SBI\_CH | * agreed |
| * S5-185111 | * R15 CR 32.290 Correction on CTF in 5G Charging | * Huawei Technologies Co. Ltd. | * 32.290 | * 0003 | * - | * Rel-15 | * B | * 5GS\_Ph1-SBI\_CH | * agreed |
| * S5-185215 | * R15 CR 32.290 Introduce Use of NRF Framework | * Nokia, Nokia Shanghai Bell | * 32.290 | * 0004 | * - | * Rel-15 | * B | * 5GS\_Ph1-SBI\_CH | * revised |
| * S5-185393 | * R15 CR 32.290 Introduce Use of NRF Framework | * Nokia, Nokia Shanghai Bell | * 32.290 | * 0004 | * 1 | * Rel-15 | * B | * 5GS\_Ph1-SBI\_CH | * agreed |
| * S5-185216 | * R15 CR 32.290 Update combined scenarios | * Nokia, Nokia Shanghai Bell | * 32.290 | * 0005 | * - | * Rel-15 | * B | * 5GS\_Ph1-SBI\_CH | * agreed |
| * S5-185217 | * R15 CR 32.290 Update Message Content request and response | * Nokia, Nokia Shanghai Bell, Huawei, Ericsson | * 32.290 | * 0006 | * - | * Rel-15 | * B | * 5GS\_Ph1-SBI\_CH | * merged |
| * S5-185237 | * R15 CR 32.290 Correction on the Converged Charging Scenarios | * Huawei Technologies Co. Ltd. | * 32.290 | * 0007 | * - | * Rel-15 | * B | * 5GS\_Ph1-SBI\_CH | * merged |
| * S5-185238 | * R15 CR 32.290 Correction on Message Content | * Huawei Technologies Co. Ltd. | * 32.290 | * 0008 | * - | * Rel-15 | * B | * 5GS\_Ph1-SBI\_CH | * revised |
| * S5-185395 | * R15 CR 32.290 Correction on Message Content | * Huawei, Nokia, Nokia Shanghai Bell, Ericsson | * 32.290 | * 0008 | * 1 | * Rel-15 | * B | * 5GS\_Ph1-SBI\_CH | * agreed |
| * S5-185239 | * R15 CR 32.290 Correction on Nchf\_ConvergedCharging\_Notify Service Operation | * Huawei Technologies Co. Ltd. | * 32.290 | * 0009 | * - | * Rel-15 | * B | * 5GS\_Ph1-SBI\_CH | * revised |
| * S5-185390 | * R15 CR 32.290 Correction on Nchf\_ConvergedCharging\_Notify Service Operation | * Huawei Technologies Co. Ltd. | * 32.290 | * 0009 | * 1 | * Rel-15 | * B | * 5GS\_Ph1-SBI\_CH | * agreed |
| * S5-185240 | * R15 CR 32.290 Correction on the Requirement for Converged Charging | * Huawei Technologies Co. Ltd. | * 32.290 | * 0010 | * - | * Rel-15 | * B | * 5GS\_Ph1-SBI\_CH | * revised |
| * S5-185391 | * R15 CR 32.290 Correction on the Requirement for Converged Charging | * Huawei Technologies Co. Ltd. | * 32.290 | * 0010 | * 1 | * Rel-15 | * B | * 5GS\_Ph1-SBI\_CH | * agreed |
| * S5-185241 | * R15 CR 32.290 Update of Service Operation | * Huawei Technologies Co. Ltd. | * 32.290 | * 0011 | * - | * Rel-15 | * B | * 5GS\_Ph1-SBI\_CH | * revised |
| * S5-185392 | * R15 CR 32.290 Update of Service Operation | * Huawei,Ericsson | * 32.290 | * 0011 | * 1 | * Rel-15 | * B | * 5GS\_Ph1-SBI\_CH | * agreed |
| * S5-185242 | * Rel-15 CR 32.290 Update of Nchf\_ConvergedCharging\_Create service operation | * Huawei Technologies Co. Ltd. | * 32.290 | * 0012 | * - | * Rel-15 | * B | * 5GS\_Ph1-SBI\_CH | * merged |
| * S5-185244 | * Rel-15 CR 32.290 Update of Scenarios | * Huawei Technologies Co. Ltd. | * 32.290 | * 0013 | * - | * Rel-15 | * B | * 5GS\_Ph1-SBI\_CH | * revised |
| * S5-185388 | * Rel-15 CR 32.290 Update of Scenarios | * Huawei, Ericsson, Nokia, Nokia Shanghai Bell | * 32.290 | * 0013 | * 1 | * Rel-15 | * B | * 5GS\_Ph1-SBI\_CH | * agreed |
| * S5-185253 | * Rel-15 pCR 32.290 Addition of Trigger Mechanism | * Huawei Technologies Co. Ltd. | * 32.290 | * 0014 | * - | * Rel-15 | * B | * 5GS\_Ph1-SBI\_CH | * revised |
| * S5-185394 | * Rel-15 pCR 32.290 Addition of Trigger Mechanism | * Huawei Technologies Co. Ltd. | * 32.290 | * 0014 | * 1 | * Rel-15 | * B | * 5GS\_Ph1-SBI\_CH | * merged |
| * S5-185339 | * Rel-15 CR 32.290 Update of description of flows | * Ericsson | * 32.290 | * 0015 | * - | * Rel-15 | * B | * 5GS\_Ph1-SBI\_CH | * merged |
| * S5-185340 | * Rel-15 CR 32.290 Adding flow for Notify | * Ericsson | * 32.290 | * 0016 | * - | * Rel-15 | * B | * 5GS\_Ph1-SBI\_CH | * merged |
| * S5-185342 | * Converged Charging service definition update | * Openet Telecom | * 32.290 | * 0017 | * - | * Rel-15 | * B | * 5GS\_Ph1-SBI\_CH | * agreed |
| * S5-185114 | * R15 CR 32.297 Introduce the Bd for 5G Charging | * Huawei Technologies Co. Ltd. | * 32.297 | * 0030 | * - | * Rel-15 | * B | * 5GS\_Ph1-DCH | * revised |
| * S5-185373 | * R15 CR 32.297 Introduce the Bd for 5G Charging | * Huawei Technologies Co. Ltd. | * 32.297 | * 0030 | * 1 | * Rel-15 | * B | * 5GS\_Ph1-DCH | * agreed |
| * S5-185101 | * R15 CR 32.298 Update the value of secondary RAT type | * China Mobile | * 32.298 | * 0665 | * - | * Rel-15 | * F | * EDCE5-CH | * agreed |
| * S5-185306 | * Rel-15 CR 32.298 Add Charging-ID to RAN Secondary RAT Usage Report | * Ericsson | * 32.298 | * 0666 | * - | * Rel-15 | * F | * EDCE5-CH | * revised |
| * S5-185481 | * Rel-15 CR 32.298 Add Charging-ID to RAN Secondary RAT Usage Report | * Ericsson | * 32.298 | * 0666 | * 1 | * Rel-15 | * F | * EDCE5-CH | * agreed |
| * S5-185313 | * Rel-15 CR 32.298 Introduction of CHF-CDR | * Ericsson | * 32.298 | * 0667 | * - | * Rel-15 | * B | * 5GS\_Ph1-DCH | * revised |
| * S5-185469 | * Rel-15 CR 32.298 Introduction of CHF-CDR | * Ericsson | * 32.298 | * 0667 | * 1 | * Rel-15 | * B | * 5GS\_Ph1-DCH | * agreed |
| * S5-185314 | * Rel-15 CR 32.298 Addition of DataVolumeOctets in generic CDR part | * Ericsson | * 32.298 | * 0668 | * - | * Rel-15 | * B | * 5GS\_Ph1-DCH | * revised |
| * S5-185472 | * Rel-15 CR 32.298 Addition of DataVolumeOctets in generic CDR part | * Ericsson | * 32.298 | * 0668 | * 1 | * Rel-15 | * B | * 5GS\_Ph1-DCH | * agreed |
| * S5-185333 | * R15 CR 32.298 Introduce new roaming CDR | * Nokia, Nokia Shanghai Bell | * 32.298 | * 0669 | * - | * Rel-15 | * B | * 5GS\_Ph1-SBI\_CH | * revised |
| * S5-185470 | * R15 CR 32.298 Introduce new Charging Function record type | * Nokia, Nokia Shanghai Bell | * 32.298 | * 0669 | * 1 | * Rel-15 | * B | * 5GS\_Ph1-SBI\_CH | * agreed |
| * S5-185337 | * R15 CR 32.298 Upgrade ASN1 modules version | * Nokia, Nokia Shanghai Bell | * 32.298 | * 0670 | * - | * Rel-15 | * B | * 5GS\_Ph1-SBI\_CH | * revised |
| * S5-185471 | * R15 CR 32.298 Upgrade ASN1 modules version | * Nokia, Nokia Shanghai Bell | * 32.298 | * 0670 | * 1 | * Rel-15 | * B | * 5GS\_Ph1-SBI\_CH | * agreed |
| * S5-185102 | * R15 CR 32.299 Update the value of secondary RAT type | * China Mobile | * 32.299 | * 0809 | * - | * Rel-15 | * F | * EDCE5-CH | * agreed |
| * S5-185307 | * Rel-15 CR 32.299 Add Charging-ID to RAN Secondary RAT Usage Report | * Ericsson | * 32.299 | * 0810 | * - | * Rel-15 | * F | * EDCE5-CH | * revised |
| * S5-185482 | * Rel-15 CR 32.299 Add Charging-ID to RAN Secondary RAT Usage Report | * Ericsson | * 32.299 | * 0810 | * 1 | * Rel-15 | * F | * EDCE5-CH | * agreed |
| * S5-185309 | * Rel-15 CR 32.299 Introduction of reporting and reacting overload handling | * Ericsson | * 32.299 | * 0811 | * - | * Rel-15 | * B | * DOCME\_CH | * revised |
| * S5-185478 | * Rel-15 CR 32.299 Introduction of reporting and reacting overload handling | * Ericsson | * 32.299 | * 0811 | * 1 | * Rel-15 | * B | * DOCME\_CH | * agreed |
| * S5-185310 | * Rel-15 CR 32.299 Introduction of AVP for Overload Control | * Ericsson | * 32.299 | * 0812 | * - | * Rel-15 | * B | * DOCME\_CH | * revised |
| * S5-185479 | * Rel-15 CR 32.299 Introduction of AVP for Overload Control | * Ericsson | * 32.299 | * 0812 | * 1 | * Rel-15 | * B | * DOCME\_CH | * revised |
| * S5-185382 | * Rel-15 CR 32.299 Introduction of AVP for Overload Control | * Ericsson | * 32.299 | * 0812 | * 2 | * Rel-15 | * B | * DOCME\_CH | * agreed |
| * S5-185311 | * Rel-15 CR 32.299 Introduction of overload AVP description | * Ericsson | * 32.299 | * 0813 | * - | * Rel-15 | * B | * DOCME\_CH | * revised |
| * S5-185480 | * Rel-15 CR 32.299 Introduction of overload AVP description | * Ericsson | * 32.299 | * 0813 | * 1 | * Rel-15 | * B | * DOCME\_CH | * agreed |
| * S5-185139 | * CR 32.425 Add definition of UE active numbers related measurements | * Huawei, China Telecom | * 32.425 | * 0171 | * - | * Rel-15 | * B | * TEI15 | * withdrawn |
| * S5-185274 | * Rel-16 CR 32.425 Add definition of UE active numbers related measurements | * Huawei, China Telecom | * 32.425 | * 0172 | * - | * Rel-16 | * B | * TEI16 | * revised |
| * S5-185405 | * Rel-16 CR 32.425 Add definition of UE active numbers related measurements | * Huawei, China Telecom | * 32.425 | * 0172 | * 1 | * Rel-16 | * B | * TEI16 | * revised |
| * S5-185593 | * Rel-16 CR 32.425 Add definition of UE active numbers related measurements | * Huawei, China Telecom | * 32.425 | * 0172 | * 2 | * Rel-16 | * B | * TEI16 | * agreed |
| * S5-185178 | * Rel-15 CR 32.426 Addition of PFCP session management measurements | * Huawei | * 32.426 | * 0070 | * - | * Rel-15 | * B | * ME\_CUPS | * revised |
| * S5-185463 | * Rel-15 CR 32.426 Addition of PFCP session management measurements | * Huawei | * 32.426 | * 0070 | * 1 | * Rel-15 | * B | * ME\_CUPS | * revised |
| * S5-185613 | * Rel-15 CR 32.426 Addition of PFCP session management measurements | * Huawei | * 32.426 | * 0070 | * 2 | * Rel-15 | * B | * ME\_CUPS | * agreed |

## Annex C: Lists of liaisons

### C1: Incoming liaison statements

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Document | Original | Title | From | Decision | Reply in |
| * S5-185039 |  | * LS from CT1 to SA5 on Multi-identity and multi-device requirements | * C1-184818 | * noted |  |
| * S5-185040 |  | * Resubmitted Reply LS from CT3 to SA5 on Addition of AVP code definitions | * C3-183701 | * postponed |  |
| * S5-185041 |  | * LS reply from SA2 ccSA5 to LS on clarification for spending limit control functionality | * S2-187579 | * noted |  |
| * S5-185042 |  | * LS from GSMA to SA5 on Publication of new paper on network slicing and future plans | * GSMA NEST | * postponed | * S5-185434 |
| * S5-185043 |  | * LSout to various organisations on usage of NFV Specifications | * ETSI ISG NFV | * postponed |  |
| * S5-185044 |  | * LS from ETSI NTECH to SA5 on Information about publication of ETSI TS 103 195-2 v1.1.1 “An Architectural Reference Model for Autonomic Networking, Cognitive Networking and Self-Management” | * ETSI TC NTECH | * noted |  |
| * S5-185045 |  | * Resubmitted LS from RAN2 to SA5 on Bluetooth/WLAN measurement collection in MDT | * R2-1808793 | * noted |  |
| * S5-185046 | * R2-1809158 | * LS from RAN2 to SA5 on adding measurements on average number of total active UEs | * R2-1809158 | * withdrawn |  |
| * S5-185047 |  | * LS from RAN2 to SA5 on L2 measurements | * R2-1810957 | * replied to | * S5-185403 |
| * S5-185048 |  | * Reply LS cc SA5 on adding new service type in QMC reporting | * R3-183320 | * noted |  |
| * S5-185049 |  | * Reply LS from SA2 cc SA5 on LS to 3GPP on QoS Prediction | * S2-185846 | * noted |  |
| * S5-185050 |  | * LS out from SA2 to SA5 on 5G GUTI and EPS Interworking | * S2-186176 | * noted |  |
| * S5-185051 |  | * LS from SA2 to SA5 on Data Analytics in SA WG2/NWDAF | * S2-187617 | * replied to | * S5-185404 |
| * S5-185052 |  | * Resubmitted Reply LS from SA4 to SA5 on Attributes for QoE measurement collection | * S4-180240 | * postponed |  |
| * S5-185053 |  | * LS from ITU-T SG2 to SA5 on Methodology harmonization (Reply to “3GPP TSG SA5 - Tdoc S5-176437 -E” and “3GPP TSG SA5 - Tdoc S5-181375 –E”) | * ITU-T SG2 | * replied to | * S5-185553 |
| * S5-185054 |  | * LS from ITU-T SG15 to SA5 on cooperation on REST-based network management framework | * ITU-T SG15 | * postponed |  |
| * S5-185055 |  | * Reply LS from TSG SA cc SA5 to “5G for Industrial Communication” | * TSG SA | * noted |  |
| * S5-185336 |  | * LS reply from SA2 to SA5 on Use of NRF framework by CHF for information | * S2-187577 | * replied to | * S5-185367 |
| * S5-185348 |  | * LS from BBF cc SA5 Response to 3GPP SA2 liaison S2-183036 on ‘general status of work | * BBF | * noted |  |
| * S5-185365 | * R2-1809158 | * Reply LS to S5-1812392 on adding measurements on average number of total active UEs (R2-1809158; to: SA5; cc: -; contact: Huawei) | * R2-1809158 | * replied to | * S5-185402 |
| * S5-185401 | * IETF\_LS\_180814 | * Reply LS to S5-184272 on Further Information About IETF Work Relevant to Network Slicing (IETF\_LS\_180814; to: SA5; cc: -; contact: IETF L2SM WG chairman) | * IETF | * postponed |  |
| * S5-185451 | * R3-185114 | * Reply LS to S5-182574, S5-193622, S5-184337 on L2 measurements (R3-185114; to: SA5, RAN2; cc: -; contact: Ericsson) | * R3-185114 | * replied to | * S5-185560 |

### C2: Outgoing liaison statements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Document | Title | To | Cc | reply to i/c LS |
| * S5-185367 | * Reply to S2-187577 = S5-185336 on Use of NRF framework by CHF for information (to: SA2, CT4; cc: CT3; contact: Ericsson) | * SA2, CT4 | * CT3 | * S5-185336 |
| * S5-185404 | * Reply to S2-187617 = S5-185051 on Data Analytics in SA WG2 NWDAF (to: SA2; cc: SA, RAN, RAN3, RAN2; contact: Huawei) | * SA2 | * SA, RAN, RAN3, RAN2 | * S5-185051 |
| * S5-185553 | * Reply to ITU-T SG2 LS63 = S5-185053 on methodology harmonization (to: ITU-T SG2; cc: -; contact: Ericsson) | * ITU-T SG2 | * - | * S5-185053 |
| * S5-185560 | * Reply to R3-185114 = S5-185451 on L2 measurement (to: RAN3; cc: RAN1, RAN2; contact: Ericsson) | * RAN3 | * RAN1, RAN2 | * S5-185451 |
| * S5-185585 | * Reply LS to R2-1810957 = S5-185047 on L2 measurement (to: RAN2; cc: RAN1, RAN3; contact: Ericsson) | * RAN2 | * RAN1, RAN3 | * S5-185047 |
| * S5-185594 | * Reply to R2-1809158 = S5-185365 on adding measurements on average number of total active UEs (to: RAN2; cc: -; contact: Huawei) | * RAN2 | * - | * S5-185365 |

## Annex D: List of agreed/approved new and revised Work Items

|  |  |  |  |
| --- | --- | --- | --- |
| Document | Title | Source | new/revised |
| * S5-185455 | * SID Study on 5G network and network slicing tenant management | * Huawei | * SID new |
| * S5-185639 | * SID for service management | * Ericsson Limited | * SID new |
| * S5-185642 | * New SID on Self-Organizing Networks (SON) for 5G networks | * Intel Korea, Ltd. | * SID new |
| * S5-185568 | * Revised SID on System and functional aspects of Energy Efficiency in 5G networks | * Orange | * SID revised |
| * S5-185368 | * New WID on Volume Based Charging Aspects for VoLTE | * China Mobile | * WID new |
| * S5-185586 | * New WID on energy efficiency in 5G networks | * Orange | * WID new |
| * S5-185589 | * New WID on OAM aspects of LTE and WLAN integration | * Intel Corporation (UK) Ltd | * WID new |
| * S5-185590 | * New WID network policy management for mobile networks based on NFV scenarios | * China Mobile (Suzhou) Software | * WID new |
| * S5-185591 | * WID Methodology for 5G management specifications | * Ericsson Limited | * WID new |
| * S5-185610 | * WID Intent driven management service for mobile network | * Huawei | * WID new |
| * S5-185616 | * New WID on Enhancement of performance assurance | * China Mobile, Intel Corporation (UK) Ltd | * WID new |
| * S5-185638 | * New WID on SMS Charging in 5G System Architecture Phase 1 | * Nokia, Nokia Shanghai Bell | * WID new |
| * S5-185100 | * Revised WID Network Resource Model (NRM) for 5G networks and network slicing | * Nokia, Nokia Shanghai Bell | * WID revised |
| * S5-185449 | * Revised WID on Performance assurance for 5G networks including network slicing | * Intel Corporation (UK) Ltd, China Mobile | * WID revised |
| * S5-185539 | * Revised WID Management and orchestration of 5G networks and network slicing Rev marks | * Ericsson Limited | * WID revised |
| * S5-185555 | * Revised WID on Fault supervision for 5G network and network slicing | * ZTE Corporation | * WID revised |
| * S5-185564 | * Revised WID Provisioning of 5G networks and network slicing | * Huawei | * WID revised |

## Annex E: List of draft Technical Specifications and Reports

|  |  |  |  |
| --- | --- | --- | --- |
| Document | Spec | vers | Doc title |
| * S5-185168 | * 28.803 | * 0.0.0 | * TR 28.803 skeleton |
| * S5-185323 | * 28.803 | * 0.0.0 | * TR 28.803 v0.0.0 |
| * S5-185438 | * 32.158 | * 1.2.0 | * TS 32.158 v1.2.0 |
| * S5-185474 | * 32.291 | * 0.5.0 | * TS 32.291 v0.5.0 |
| * S5-185476 | * 32.255 | * 1.2.0 | * TS 32.255 v1.2.0 |
| * S5-185582 | * 28.532 | * 0.5.0 | * TS 28.532 v0.5.0 |
| * S5-185622 | * 28.530 | * 1.3.0 | * TS 28.530 v1.3.0 |
| * S5-185623 | * 28.532 | * 0.6.0 | * TS 28.532 v0.6.0 |
| * S5-185624 | * 28.533 | * 0.6.0 | * TS 28.533 v0.6.0 |
| * S5-185625 | * 28.531 | * 1.3.0 | * TS 28.531 v1.3.0 |
| * S5-185626 | * 28.540 | * 1.2.0 | * TS 28.540 v1.2.0 |
| * S5-185627 | * 28.541 | * 1.2.0 | * TS 28.541 v1.2.0 |
| * S5-185628 | * 28.545 | * 0.6.0 | * TS 28.545 v0.6.0 |
| * S5-185629 | * 28.550 | * 1.3.0 | * TS 28.550 v1.3.0 |
| * S5-185630 | * 28.552 | * 0.6.0 | * TS 28.552 v0.6.0 |
| * S5-185631 | * 28.554 | * 1.3.0 | * TS 28.554 v1.3.0 |
| * S5-185632 | * 28.900 | * 0.5.0 | * TR 28.900 v0.5.0 |
| * S5-185633 | * 32.972 | * 0.6.0 | * TR 32.972 v0.6.0 |
| * S5-185634 | * 28.404 | * 0.4.0 | * TS 28.404 v0.4.0 |
| * S5-185635 | * 28.405 | * 0.2.0 | * TS 28.405 v0.2.0 |
| * S5-185636 | * 28.803 | * 0.1.0 | * TR 28.803 v0.1.0 |

## Annex F: List of participants

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| TITLE | Family Name | Given Name | Employer Organization | Employer Category Code | Organization Represented |
| Dr. | Al-kanani | Hassan | NEC Europe Ltd | ETSI | NEC Corporation |
| Mr. | Andrianov | Anatoly | Nokia Germany | ETSI | Nokia |
| Mrs. | Ayani | Zhulia | Ericsson LM | ETSI | Ericsson Japan K.K. |
| Ms. | Chen | Ai | China Mobile US Research Cente |  | China Mobile M2M Company Ltd. |
| Miss | CHEN | SHAN | Huawei Tech.(UK) Co., Ltd | ETSI | Huawei Technologies Co. Ltd. |
| Mr. | Chou | Joey | Intel Corporation (UK) Ltd | ETSI | Intel Korea, Ltd. |
| Dr. | Cornily | Jean Michel | Orange | ETSI | Orange Spain |
| Mr. | Costello | Tim | BT plc | ETSI | BT plc |
| Mr. | Fang | Bo | China Mobile Com. Corporation | CCSA | China Mobile Com. Corporation |
| Mrs. | Gardella | Maryse | Nokia France | ETSI | Nokia France |
| Mr. | Groenendijk | Jan | Ericsson LM | ETSI | Ericsson Limited |
| Mr. | Harper | Colby | Pivotal Commware | ATIS | Pivotal Commware |
| Mr. | Horvat | Attila | Huawei Technologies Sweden AB | ETSI | Huawei Technologies Sweden AB |
| Mr. | Jan | Onnegren | Ericsson LM | ETSI | Ericsson GmbH, Eurolab |
| Mr. | Jesske | Roland | Deutsche Telekom AG | ETSI | Deutsche Telekom AG |
| Mr. | Klotz | Michael | Deutsche Telekom AG | ETSI | Deutsche Telekom AG |
| Dr. | Krause | Joern | ETSI | ETSI | ETSI |
| Mr. | Li | Duan | China Mobile Com. Corporation | CCSA | China Mobile Com. Corporation |
| Mr. | Li | Gang | Nanjing Ericsson Panda Com Ltd | CCSA | Nanjing Ericsson Panda Com Ltd |
| Dr. | Neal | Adrian | Vodafone Group Plc | ETSI | Vodafone Group Plc |
| Mr. | Petersen | Robert | Ericsson LM | ETSI | Ericsson India Private Limited |
| Miss | Ping | Jing | Nokia Germany | ETSI | Nokia Solutions & Networks (I) |
| Dr. | Pollakowski | Olaf | Nokia Germany | ETSI | Nokia Germany |
| Mr. | Sakae | Kozo | DOCOMO Communications Lab. | ETSI | NTT DOCOMO INC. |
| Mr. | Smith | David K. | AT&T GNS Belgium SPRL | ETSI | AT&T GNS Belgium SPRL |
| Miss | Sun | Xiaowen | China Mobile Research Inst. |  | China Mobile (Suzhou) Software |
| Mr. | Takahashi | Tomohiko | ITOCHU Techno-Solutions Corp | TTC | ITOCHU Techno-Solutions Corp |
| Mr. | Toche | Christian | Huawei Technologies France | ETSI | HiSilicon Technologies Co. Ltd |
| Mr. | Törnkvist | Robert | Ericsson LM | ETSI | Ericsson France S.A.S |
| Mr. | Tovinger | Thomas | Ericsson LM | ETSI | Ericsson LM |
| Mr. | Tse | Edwin | Ericsson LM | ETSI | Ericsson Inc. |
| Mr. | Vishwakarma | Abinash | NEC Europe Ltd | ETSI | NEC Europe Ltd |
| Mr. | Xu | Ruiyue | Huawei Tech.(UK) Co., Ltd | ETSI | Huawei Device Co., Ltd |
| Dr. | Yanover | Vladimir | Cisco Systems Belgium | ETSI | Cisco Systems Belgium |
| Mr. | Zhang | Kai | Huawei Tech.(UK) Co., Ltd | ETSI | Huawei Tech.(UK) Co., Ltd |
| Mr. | Zhu | Lei | Huawei Tech.(UK) Co., Ltd | ETSI | Huawei Telecommunication India |
| Mr. | Zhu | Weihong | ZTE Corporation | ETSI | ZTE Corporation |
| Miss | Zou | Lan | Huawei Tech.(UK) Co., Ltd | ETSI | HuaWei Technologies Co., Ltd |
| Mr. | Zvezdin | Pavel | NEC Corporation | ETSI | NEC Europe Ltd |

## 

## Annex G: List of future meetings

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Title | Start date | End date (OP) | Town | Country | Reference |
| * SA5#121 | * 2018-10-08 | * 2018-10-12 | * Kochi | * IN | * S5-121 |
| * Workshop on submission towards IMT-2020 | * 2018-10-24 | * 2018-10-25 | * Brussels | * BE | * S5-ah-34069 |
| * SA5#122 | * 2018-11-12 | * 2018-11-16 | * Montreal | * CAN | * S5-122 |
| * SA5#123 | * 2019-01-21 | * 2019-01-25 | * US | * US | * S5-123 |
| * SA5#124 | * 2019-02-25 | * 2019-03-01 | * Taipei | * TW | * S5-124 |
| * SA5#125 | * 2019-04-08 | * 2019-04-12 | * US | * US | * S5-125 |
| * SA5#126 | * 2019-05-13 | * 2019-05-17 | * Sophia Antipolis | * FR | * S5-126 |
| * SA5-Ad Hoc Possibility TBC | * 2019-06-24 | * 2019-06-28 | * Sapporo | * JP | * S5-ah-40151 |
| * SA5#127 | * 2019-08-19 | * 2019-08-23 | * Bruges | * BE | * S5-127 |
| * SA5-OAM Ad Hoc | * 2019-10-21 | * 2019-10-25 | * Sophia Antipolis | * FR | * S5-ah-34467 |
| * SA5-Ad Hoc TBC | * 2019-10-21 | * 2019-10-25 | * TBD |  | * S5-ah-40152 |
| * SA5#128 | * 2019-11-18 | * 2019-11-22 | * China | * CN | * S5-128 |