**Source: MBS SWG Chairman[[1]](#footnote-1)**

**Title: Report of MBS SWG ad-hoc telco on FS\_5GMS\_Multicast and FS\_EMSA – 7th May 2020 –**

**Document for: Approval**

### Agenda for MBS SWG ad-hoc conference call

# Opening of the session (15:00 CEST)

As agreed during SA4#108-e:

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| **3GPP SA4 SWG joint Telco on FS\_5GMS\_Multicast and FS\_EMSA (May 7, 2020, 15:00-17:00 CEST, Host Qualcomm)****15:00-16:00 FS\_5GMS\_Multicast****16:00-17:00 FS\_EMSA****Submission deadline May 5, 2020, 23:59 CEST** | * Initiate a discussion on scenarios where multicast ingestion or multicast distribution might be used
* Agree on the skeleton draft of TR 26.802
 |

Participants:

* Qualcomm – Thomas Stockhammer
* ZTE – Chuanyang Miao
* Enensys – Cédric Thiénot
* Ericsson – Frédéric Gabin
* Interdigital – Henri Fourdeux
* Qualcomm – Imed Bouazizi
* Tencent – Iraj Sodagar
* AT&T – James Hu
* MCC – Jayeeta Saha
* Qualcomm – Min Wang
* Telus – Peng Tan
* Mattrix – Robert Edwards
* Samsung – Hyunkoo Yang
* Samsung – Prakash Kolan
* BBC – Simon Goldrei
* Sony – Paul Szucs
* Ericsson – Thorsten Lohmar
* Broadpeak – Tuan Tran
* Tencent – Zhuoyun Zhang
* KPN N.V. - Jan Willem Kleinrouweler
* KPN N.V. - Lucia D'Acunto

Minutes were taken by Thomas and Iraj.

MBS SWG Tdoc list available at:

<https://docs.google.com/document/d/1pv7f_dks0Tzcnr46kXJ2QSCX7kvxEE7olI31VWIxZeI/edit?usp=sharing>

The minutes are shared online:

https://drive.google.com/file/d/1taSQGj3TclmACz2Hfzj15JmH4m9FQv1-/view?usp=sharing

# Approval of the agenda and registration of documents

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| S4-AHI976 | Proposed agenda for MBS SWG ad-hoc telco on FS\_5GMS\_Multicast and FS\_EMSA 7th May 2020 | SA4 MBS Chairman | 2 |  |

**Presenter**: Frederic Gabin (Chairman)

**Discussion**:

* None.

**Decision**:

* Approved

# Reports and liaisons from other groups

# FS\_5GMS\_Multicast (Feasibility Study on Multicast Architecture Enhancements for 5GMSA)

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| S4-AHI982 | Proposed Skeleton TR26.802 Multicast Architecture Enhancement for 5G Media Streaming | Telus | 4 |  |

**Presenter**: Peng Tan (Telus)

**Discussion**:

* Fred: any changes compared to the document in last meeting
* Pen: Only added key issues
* Fred: the date should be the current date.
* Thomas: one aspect to add that the baseline is coming SA2, and other specs. we should add context including in section 4
* Pan: we can add a subsection to 4 on the other SDO’s studies
* Richard: can we add references for SA2 FS\_5MBS study and other SDO’s specifications?
* Peng: yes we can.
* Thorsten: we should look at other SDO’s done on IGMD, so please add the reference.
* Thomas: the scope is the same as the Study Item description. Can we add references to external spec
* Peng: agreed.
* Thomas: it is too early to add headings for key issues. The key issues should come from contributions.
* Peng: OK.
* Thomas: what comes after the description in each key issue? gap analysis? Can we add that?
* Peng: OK
* Thomas: we should be careful not to discuss anything outside of SA4 scope.
* Peng: We can discuss it on the key issue if some of it is addressed by other SDO
* Thomas: for section 6 title, can you add “potential solutions”?
* Peng: Yes.
* Thomas: Can you use the same outline as FS\_5XR layout for section 7?
* Peng: Yes.

**Decision:**

* The document is noted. A revision is expected for the next meeting.

**S4-AHI982** is **noted**

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| S4-AHI978 | Initial Considerations on FS\_5GMS\_Multicast | Qualcomm Incorporated | 4 |  |

**Presenter**: Thomas Stockhammer (Qualcomm)

**Discussion**:

* Richard: 1) we might find that some of the key issues still being addressed by SA2 but we can staet of study in parallel. 2) I don;t know whether m2d is a right ingest point for multicast. 5GMSD in my view is a web server. While multicast ingest doesn’t seem to fit there.
* Thomas: we may create a new m3d for multicast or whether we do it part of m2d can be solved in study.
* Thorsten: it is too early to decide to extend the ingest for multicast. SA2 would define that. On deviceside, the interop should be done by another spec, so it is not clear that we need to have interoperability at transport on client side for multicast.
* Thomas: today’s 5GSM architecture doesn’t have any support.
* Thorsten: I’m not sure M5d needs to intercept the multicast.
* Thorsten: u can send the multicast different to BMSC and I think BMSC can forward the multicast packets. therefore there is no need to address it in SA4.
* THomas: we should study and if there is no extension needed in 5GMS, then we don’t need to do anything.
* Thorsten: I expect the outcome of the SA2 multicast study will be that transparent multicast packet forwarding will be handled by their specification.
* Peng: (1) We do need M2d multicast support because we need a function in an AF to support conversion from multicast to unicast ABR in the network.
* Peng: (1) we need to have M2d support for multicast because we need multicast ABR.
* Thorsten: please contribute on these topics.
* Peng: (2) the key issues need to be expanded based on the template that we agreed.
* Peng: (3) FWA is key issue in the SA2 study, but is ACS relevant to 5G Media Streaming? It should not be included in the document if it is not relevant.
* Thomas: this could be. We need to understand the details more
* Cedric: key issue 6 is vague. Key Issue 2 needs clarification.
* Thomas: Requests clarification of Key Issue #1 (Use Case?)
* Cedric: What is Key Issue #6

Thomas : just wanted to start the discussion. We can refine the scope of key issues.

* Thorston: on key issues, we need more elaboration, because the details are not clear from a single line.
* Richard: for multicast-unicast ABR, if we decide we need some application service can ingest the multicast service. It doesn’t necessarily need to be the 5GMSd AF controlling the 5GMSd AS ingesting at M2d and M4d. At this stage, we should talk about a geneic Application Function controlling a generic Application Server with ingest/distribution interfaces.
* Peng: we can start with generic description and see where it goes. It will be additional functions.

**Decision:**

* The document is noted.

**S4-AHI978** is **noted**

# FS\_EMSA (Feasibility Study on Streaming Architecture extensions For Edge processing)

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| S4-AHI980 | Proposal for draft skeleton for TR 26.803 | Qualcomm Incorporated | 5 |  |

**Presenter**: Imed Bouazizi (Qualcomm)

**Discussion**:

* Iraj: Where does the gap analysis go?
	+ Imed: Could be clause 6.1 in the potential extensions section. Or could dedicate a separate subclause to document the gaps.
	+ Add an editor’s note
* Iraj: If we find that there is need for other extensions (for example SA2), how would we document this?
	+ Imed: we can document and liaise with groups
* Thorsten: You have potential architecture solutions. Does clause 6 include solutions? The use cases in clause 5 should also include a discussion on what use cases need solutions.
	+ Imed: the focus needs to be set on the architecture in the study.
	+ Thorsten: We should only develop extensions to known solutions.
* Thorsten: Headings of use cases in clause 5 is a bit confusing. Would prefer removing the clause headings.
	+ OK
* Ed: Do SA5 related work also matter?
	+ Imed: yes, we can add this in clause 4.
* Zhuoyun: Is SA2 only edge discovery? Or is there more in SA2?
	+ Imed: good point, we need to fix this - Support

**Decision:**

* Online updates agreed as baseline for new work.

**S4-AHI980** is **revised to S4-AHI984**.

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| S4-AHI984 | TR 26.803v0.0.3 | Qualcomm Incorporated | 5 |  |

**S4-AHI984** is **agreed.**

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| S4-AHI977 | Edge Computing for Content Hosting and Caching | KPN N.V. | 5 |  |

**Presenter**: Jan Willem Kleinrouweler (KPN N.V.)

**Discussion**:

* Richard: Thanks for putting this together. One question: Connection on push and pull? The 5GMSd App Provider does a push
	+ Jan Willem: Different models are possible
	+ Thorsten: M2d can use push and pull - M2d to edge is not really suitable
* Thorsten: Why does M2d go to the edge? Need to get content to distributed caches. M4d is not the content for suitable for the connection.
	+ Imed: would not put M2d directly to the edge
	+ Thorsten: What is the key issue?
* Imed: Would like to see the use case?
* Thomas: What is the use case for this? What is the CDN edge case? Unclear what the benefit is to what it means to put “content on the edge”? What is the benefit of the edge? We need to define what edge means!
* Iraj: would rather limit the use case to what we want to do
* Thorsten: OK to use the use case video streaming, but do not need to CDN realization. We do not have to deal with CDN management? Identify the problem.
* Zhuoyun: Similar concerns was previous speakers. Direct interface for Application provider to E-AS is important. Ad Insertion is not a suitable use case. Edge model needs to be discussed. Differences of the different Edge models not clear.
* James: Layered system - network solution for edge. Better focus on use cases.
	+ Thomas: support
* Prakash: can we application server functions in the egde. Can there be any AF functions?
* Thomas: Urge to really define what “edge” means. Needs to be defined by functionality and not by physical presence.

**Decision:**

* Note the document.

**S4-AHI977** is **noted**.

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| S4-AHI979 | Overview of ongoing 3GPP activities on Edge | Qualcomm Incorporated | 5 |  |

**Presenter**: Imed Bouazizi (Qualcomm)

**Discussion**:

**Decision:**

**S4-AHI979** is **noted without presentation**.

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| S4-AHI981 | Downlink Services with Network Edge | Samsung Electronics Co., Ltd | 5 |  |

**Presenter**: Prakash Kolan (Samsung)

**Discussion**:

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**Decision:**

**S4-AHI981** is **noted without presentation**.

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| S4-AHI983 | FS\_EMSA: capabilities discovery | Tencent | 5 |  |

**Presenter**: Iraj Sodagar (Tencent)

**Discussion**:

**Decision:**

**S4-AHI983** is **noted without presentation**.

# Review of the future work plan

# Any Other Business

Thomas: encourage to provide input contributions where the proposal is a markup against the agreed skeleton.

Frederic supports, also adds that justification text can be added around pCR text proposals.

# Close of the session (17:04 CEST)

The chairman thanked the delegates and the scribe and closed the call.

1. M. Frédéric Gabin

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