
CP-140679: Discussion on blocked UICC interface

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Problem of blocked UICC interface

- Summary of the problem:
 - No new command can be sent from the ME to the UICC on UICC interface while response to a previous command is pending
 - Consequently, the UICC can completely block the interface with the ME for long periods of time, not allowing any command from the ME
 - Issue is becoming more and more frequent in the field due to presence of non-3GPP applications residing on the same 3GPP UICC with the USIM
 - Interface gets blocked e.g due to UICC spending some time generating new keys/certificates for a mobile payment application, or due to the UICC installing a new application downloaded OTA using BIP
- The problem was presented in CT6 #68 in May 2013 with discussion paper [C6-130128](#)
- CT6 agreed on the severity of the issue and its impacts, as summarized to ETSI SCP in the agreed LS [C6-130181](#):

“Consequences of blocking this interface include:

- User **cannot originate any voice call or send any text messages** due to the fact that the required call control ENVELOPE command cannot be sent to the UICC
- Network authentication cannot be executed in a timely way and this procedure has some very strict timing requirements.
- **Impossibility to initiate emergency calls in some countries** where regulatory requirements mandates the authentication on the USIM for emergency calls. This can be a critical problem in emergency situations.
- User cannot navigate the toolkit menu (even if the menu is present in the UI of the terminal): this leads to the perception that phone is not working correctly.
- **User cannot access the content stored on the UICC (phonebook, SMS, SMS parameters, etc...)**

All these effects would give the end user (not aware of the interaction with the UICC) the impression that the terminal is not working correctly, **might have liability issues (in case of failed emergency calls)** and can potentially lead to instabilities of the terminal, as software is often designed to receive a response from the UICC within a limited amount of time.”

Maximum value for acceptable delay

- ETSI SCP agreed to look into the issue at platform level and asked CT6 to identify the maximum acceptable delay to have full requirements (LS in [C6-140098](#))
- The topic was discussed in CT6#71 in January 2014
 - Discussion paper [C6-140024](#) highlighted the 3GPP procedures impacted by blocked UICC interface
- CT6 agreed that a delay of 6 seconds would be the maximum that could be tolerated to avoid impact and such value was communicated back to ETSI SCP in LS [C6-140095](#):

“3GPP CT6 noted that a delay of 6 seconds and above would create interference with operation of network procedures involving the use of the UICC (see attached document C6-140024). While such interference could be recoverable in some cases, it should be noted that only a value of under 6 seconds would allow the system not to require use of error-recovery mechanisms. This value of 6 seconds does not take into considerations what delay might be acceptable in terms of user experience, as this cannot be defined by CT6.”
- CT6 agreed also LS [C6-140283](#) during CT6#72 in May 2014, indicating again a maximum acceptable delay of 6 seconds and the intention to proceed with the requirement, and asking ETSI SCP to prioritize the work for Rel.12 given the severity of the issue:

“Ongoing discussions are taking place in CT6 regarding a specific requirement in TS 31.101 for the maximum duration during which the UICC-ME interface can be blocked, matching the value of 6 seconds already communicated to SCP in C6-140095.

CT6 would like to agree a related requirement in Rel-12, as this is considered an important issue that occurs in the field with serious consequences. Anyway, it was noted during the discussion that its implementation might be complicated without proper support in the UICC framework.”

Latest status in CT6

- CR [C6-140274](#) was submitted to CT6#72 in May 2014 to introduce the 6 second requirement in CT6 specifications
- CR was revised into C6-140465 at CT6#73 (July 2014) to change requirement (“shall”) into a recommendation (“should”), to give more time for technical solution to be implemented
 - ETSI SCP has indicated that it “will do its best to provide [a solution] by end of 2014” in LS [C6-140459](#)
 - Following text was proposed:

“When a USIM application is selected on a logical channel, the UICC shall execute also commands for other applications in such a way as not to interfere or cause suspension of service provisioning to the user. [The UICC interface should not be blocked for more than 6 seconds](#) on any command on any of the logical channels.”
- 2 companies requested removing the explicit reference to 6 second value (even though it had been agreed upon a maximum acceptable delay in CT6)
- Updated text proposal in C6-140518:

“When a USIM application is selected on a logical channel, the UICC-Terminal interface shall also enable execution of commands for other applications in such a way as not to interfere or cause suspension of service provisioning to the user. [The UICC-Terminal interface should not be blocked for more than the value of timer T3360 as specified in TS 24.008 \[XX\] or timer T3460 as specified in TS 24.301 \[YY\]](#) on any command on any of the logical channels.”
- Same 2 companies objected to the CR

Proposed way forward

- Consensus in CT6 is that this is “an important issue that occurs in the field with serious consequences” (cf [C6-140283](#))
 - In particular, [emergency calls can be blocked for up to minutes in some countries](#), which can be critical in life and death situations
- It is important to agree at least a recommendation in Rel-12
- Possible options to close this out:
 - Approve CP-140680 (revision of C6-140518 and reverting to 6 second value) submitted at CT#65
 - Have CT provide guidance to CT6 via an LS on the need to agree a recommendation in Rel-12
 - Plan for a technical vote at CT6#74 (November 2014)

Thank you

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