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Release 2.0 System Integration Testing Update

1. Purpose

This paper provides an update on the progression of the Release 2.0 System Integration Testing (SIT) following from an ad-hoc Testing Advisory Group (TAG) meeting on 1st August 2018.

2. Release 2.0 SIT progress update

As per the requirements within the SEC Variation Testing Approach Document (SVTAD) for Release 2.0, the Panel is required to provide a recommendation to the Secretary of State (SoS) on SIT completion. The intent was for the Panel to make this recommendation at the August Panel meeting.

To assist in making this recommendation, the TAG met on 1st August 2018 to discuss whether or not Release 2.0 SIT had been completed. After reviewing the exit criteria, TAG determined that Release 2.0 SIT has not yet been achieved due to three areas of concern. The intent now is to bring the SIT Completion Report to the Panel in September 2018, with TAG's updated views and outstanding matters addressed.

3. TAG Considerations

The TAG reviewed a draft of the SIT Completion Report, noting that the DCC were requesting conditional approval. The reason for requesting conditional approval was that the following two test conditions had not been met:

1) A second End of Cycle Regression (clean run) test had not been conducted for Dual Band Communications Hubs; and
2) One of the three Communications Hubs used in SIT had not been Zigbee Certified.

DCC proposed that these should be subject to TAG governance, but that a conditional completion be granted. Whilst neither is an explicit completion criterion, TAG discussed whether a conditional completion could be granted or should be withheld. TAG concluded that completion should not be granted until these activities had been successfully completed.

In addition, there had been a number of tests deferred from SIT into Device Integration Testing (DIT) with agreement of the DCC Test Assurance Board (TAB) where TAG support was sought. After discussing the detail of how each outstanding test was to be completed, the TAG understood the DCC's rationale behind moving these tests from SIT into DIT, and how the testing would still provide the necessary assurance; the TAG generally being comfortable whether tests were completed with emulators or devices.

However, the TAG were very clear that all outstanding elements, whilst deferred, were still part of SIT and SIT governance. As such, SIT could not be considered complete until all the outstanding tests were completed, and the results presented to the TAG prior to Panel making a recommendation to the SoS.

Should the deferred tests fail as part of DIT then they would also fail SIT. The DCC agreed to this approach and confirmed they would treat any deferred tests as though they had been completed during SIT (including when assessing open Testing Issues) and that the governance surrounding those tests would remain unaltered with oversight from the TAB, TAG and the Panel.

The DCC explained the reason they had asked for conditional approval at this stage was not to bypass SIT governance (noting in fact that DIT governance had intended to be aligned with the oversight provided to SIT), but because it was believed right to finalise the completed elements of testing rather than keep them open for approval at a later date. There was a concern that future conversations on SIT exit would revisit discussions on already successfully completed tests which would be an inefficient use of TAG time and effort.

The TAG acknowledged that the testing successfully completed to date had achieved the required quality and the outstanding issues identified in these areas are minimal and explainable. Therefore, these elements of testing would not be revisited, and any future TAG discussion on SIT completion would focus solely on the outstanding elements yet to be completed.

4. Next steps

DCC and SECAS are working together to draft a document that provides a single place for a comprehensive list of all outstanding SIT issues to be tracked and monitored by the TAG. The document will also include timelines of when the actions are to be completed and when the TAG will revisit recommendations. Once this document is complete, it will be shared with the Panel to provide oversight of the process being undertaken.

The TAG also raised a number of detailed comments on the SIT Completion Report, mainly focusing on providing greater information on how the explicit testing evidence relates to explicit completion criteria and thereby making the report more user friendly. The DCC are in the process of making these updates so the final version addresses the issues raised by the TAG.

Additionally, both DCC and the TAG share concerns about the potential misalignment between the very high-level completion criteria listed in the Test Approach Documents, and the detail that TAG need to gain confidence on the breadth and depth of testing and assurance. This impacts how the detailed scope of testing is determined up front, how it is reported during testing and how it is demonstrated at closure. It was noted that it would be more transparent if the deferral of testing elements were explicitly agreed with the TAG prior to changes in scope taking place. As such, the TAG and DCC are working together to seek to improve the process for future releases. The Panel will be kept up to date with any developments in this area.

5. Recommendations

The Panel is requested to **NOTE** the progress on Release 2.0 SIT.

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3rd August 2018