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GCF strengthens industry engagement with NFC Forum and 3GPP Partnerships

The objective of providing ubiquitous, standardized, contactless public transport access and ticketing using any NFC-enabled device, anywhere in the world came a step closer with a new co-operation agreement between GCF and the NFC Forum. Under the agreement, test labs recognised by either party will be able to run NFC Forum test cases with mutual recognition of test results.

By adding NFC Forum test cases to GCF Certification Criteria, the testing of mobile devices that incorporate ticketing- and transport-related NFC functionality based on GSMA TS.26 NFC Handset Requirements can be completed during device certification. The test cases reference GSMA TS.27 NFC Handset Test Book.

Recognising GCF's long-standing position as the leading user of 3GPP test cases, GCF has been approved as a Market Representation Partner (MRP) to 3GPP.

Market Representation Partners are industry organisations which have the ability to offer market advice to 3GPP and to bring into 3GPP a consensus view of market requirements in areas such as features, functionality and services that fall within the 3GPP scope.

Drawing on the experiences of its 280+ device manufacturer, network operator and test industry members, GCF can contribute insights on device functionality being requested by the market, the technologies incorporated in multi-mode devices and the bands being requested for multi-band devices. GCF is also uniquely positioned to flag interoperability and performance issues being raised by members and provide feedback on testing efficiencies.

Meanwhile, GSMA's IoT Task Force has established an IoT Certification work stream that will host a workshop in early June. In advance of the workshop, GCF will present an update to the Task Force on the latest developments within GCF's certification scheme.

3GPP Freezes REL-13

Release 13 of the 3GPP standards was officially frozen at the standards body's March 2016 Plenary. As a result, Rel-13 Work Items will start to appear in GCF as manufacturer and operator members begin to implement these new or enhanced functionalities.



Very low power radio technologies, enhanced network management for the Internet of Things, public safety capabilities, WiFi interworking and mobile-friendly video formats are included in

Rel-13 which is to be branded as LTE Advanced Pro by 3GPP.

The latest update also includes additional bands for LTE and more inter-band and intra-band channel combinations for carrier aggregation.

Stage 1 of Release 14 has also been frozen. Key features identified for the next release will be vehicle-based communications, further improvements to Mission Critical work (MCPTT) and enhancements for mobile TV. Based on previous experience, this initial Rel-14 roadmap provides a good indicator of future functionality to be covered by GCF.

Steering Group

The Steering Group, GCF's principal decision making body, met for its 66th meeting in April. Hosted by Rohde & Schwarz, the meeting took place in Bangalore, India.

New Work Items

At the meeting, Rel-11 and Rel-12 features and functionality were the focus of new Work Item Proposals. The following WIPs will now be developed within the Conformance Agreement Group, CAG.

Rel-11 & 12

- EPS Enhancements

Rel-12

- LTE Carrier Aggregation configuration and configuration types introduced beyond Rel-12
- Enhanced Voice Services (EVS) for VoLTE
- UE Power Save Mode (PSM)
- LTE Coverage Enhancements
- Further Downlink MIMO Enhancement for LTE Advanced
- Small Cell Enhancements for E-UTRA

Now that more than 20 LTE bands are covered within GCF Certification, SG has approved an umbrella Work Item structure which now delegates the task of agreeing new carrier aggregation band combinations to CAG. The approach will allow for new band combinations required by the market to be brought within certification more quickly.

PAG to create LTE RF Performance Metric

A Performance Item has been proposed that will enable operators to assess device compliance against their specific limits using GCF test data captured during certification testing. The LTE RF Performance Metric will provide a mechanism for reporting the information required by an operator while eliminating duplicate testing.

In their acceptance testing programmes, some operators apply market specific limits which differ from those defined by 3GPP for some RF test cases on account of their specific network configurations. Operators who require such limits currently ask manufacturers to undertake their acceptance tests as well as the GCF test cases: this results in duplication of testing.

GCF's Key Performance Metrics programme allows manufacturers to quantify and report, in a harmonised way, on agreed aspects of the performance of a mobile device. Performance Metrics testing is an optional, but invaluable, complement to GCF Certification.

Detailed implementation of the new Performance Metric is currently being defined within the Performance Agreement Group (PAG).

GCF hosts device certification workshop in India

GCF hosted a mobile device certification workshop in Bangalore on the eve of SG#66. A number of Indian manufacturers have emerged in the high-growth local market and several are now looking to expand into international markets: GCF device certification would help them to gain traction with operator and distributor partners. Certification can also help reduce interoperability issues being experienced by consumers in India.



Lars Nielsen, GCF General Manager, thanks Ms Deb Barma of the Government of Karnataka

Ms. Tanusree Deb Barma, Director IT & Bio Technology, State Government of Karnataka, India, gave a welcome address to the participants at the workshop.

The workshop provided an overview of the benefits of certification, an introduction to the work of 3GPP RAN5 and an update on GCF's activities in India. The Mobile Standards Association of India explained the requirements for IMEIs and the process for their allocation. GCF Office staff guided delegates through the various stages of the device certification process. Several GCF directors were available to answer questions about the potential benefits of the GCF scheme.

At SG#66 immediately following the workshop, it was agreed to investigate further

how GCF's practices and resources could be shared to the benefit of the mobile industry and consumers in India.

Member companies as well as non-member companies and other relevant stakeholders in India will be canvassed on specific local requirements and expectations for certification. In a parallel activity stream, GCF members will consider how GCF's accumulated expertise, experience, processes and tools could most appropriately be made available for use in India.

MENA Workshops

Dubai, 19 & 20 July 2016

GCF will host workshops to explain how device certification can contribute to the continued success of the mobile industry in the Middle East and North Africa.

Organised in association with UAE operator du, the workshop on 19 July will focus on operator benefits of certification. On 20 July, the relevance of GCF to device manufacturers and the test sector will be addressed.

For more information, visit <http://bit.ly/DubaiWorkshop2016>



Carrier Aggregation coverage extended

Band 42 certification activated by CAG

Carrier Aggregation is an important focus for CAG, the Agreement Group which is responsible for developing conformance Certification Criteria. Certification of inter-band Carrier Aggregation between bands 1A and 21A and intra-band CA in TDD band 39C and FDD bands 3C and 4A was activated at CAG#45 in January. The meeting in Taipei was hosted by Intertek Testing Services.

Certification of Network-requested Carrier Aggregation Band Combination Capability Signalling was activated for LTE bands 20, 38, 39, 40 and 41.

Band 42 (3400-3600 MHz), which is about to be rolled out by at least three operators, became the fifth TDD LTE band to be brought within GCF Certification with the activation of a Rel-8 Work Item.

Enhanced inter-cell Interference coordination (eICIC) was activated for FDD LTE bands 02, 11, 13, 18, 19, and 28 and TDD band 40.

The continuous process of updating Certification in line with ongoing enhancements to the underlying 3GPP standards continued with the activation of a number of Rel-11 Work Items.

Improved Minimum Performance Requirements: Interference Rejection is a Rel-11 technology to suppress interference signals from non-serving cells. It has been activated for LTE bands 01, 02, 03, 04, 05, 13, 19, 21 and 28.

Enhanced Minimization of Drive Tests (eMDT) can now be certified in FDD LTE Bands 02, 04, 05 and 07 and TDD Bands 38, 39, 40 and 41.

Of relevance to companies involved in M2M, System Improvements for Machine Type Communication (SIMTC) has been activated for LTE Bands: 02, 03, 04, 05, 07, 13 and 20.

Supporting cdma2000 / LTE co-existence in CAG2

The Conformance Agreement Group 2 (CAG2) develops Certification Criteria for cdma2000 devices. Co-existence and integration of cdma2000 with LTE functionality was a recurring theme in CAG's two meetings since the last edition of Certification News. CAG2#10 met in January in San Diego, California, where Qualcomm hosted the meeting with delegates discussing the ongoing needs of the cdma2000 ecosystem.

The following work items were completed and activated in certification:

- Enhanced Circuit Switched Fall Back (CSFB) to cdma2000 1X-RTT voice calling Conformance Testing
- LTE-cdma2000 iRAT Transitions Conformance Testing

Sprint hosted the CAG2#11 meeting in Kansas, USA, in April where five work items were activated.

- LTE-cdma2000 iRAT Transitions Conformance Testing for Band 25
- Hybrid 1x LTE Performance Testing
- Level 0 Basic and Level 1 Reduced Test Plans for Hybrid 1x LTE Interoperability

Testing

- Level 0 Basic and Level 1 Reduced Test Plans for LTE-cdma2000 iRAT Transitions Conformance Testing
- cdma2000 Basic Core Conformance Testing

Five additional work items are being progressed with activation of three on target for CAG#12 in July:

- LTE-cdma2000 iRAT Conformance Testing for Bands 26 and 41
- e1xCSFB Conformance Testing for Bands 26 and 41
- cdma2000 Wireless Interoperability Testing
- Voice-over-WiFi and 3GPP2 IOT Testing
- Hybrid VoLTE

Initial investigation of two new testing areas has begun:

- cdma2000-LTE iRAT Interoperability Testing
- Commercial Mobile Alert Service (CMAS) – a US wide area broadcast capability for emergency alerts.

NEWS IN BRIEF

Open Market Product Interoperability

GSMA has announced a study on Open Market Product Interoperability which will complement GCF's current efforts to develop strategies addressing the certification of open market devices especially in regional markets where they predominate. GCF will remain in contact with GSMA during the study.

GSMA Mobile IoT Initiative

Certification processes will be one of the streams in the GSMA's Mobile IoT Initiative. GCF is already deeply involved with the certification of IoT devices through its M2M and MMCP taskforces and anticipates approving new work items covering NB-IoT, LTE CAT-M and EC-GSM-IoT at forthcoming meetings.

Farewell Colin

After serving on the GCF Board, and as Chair and Vice-Chair of Steering Group over several years, Colin Hamling bade farewell to GCF in March on his departure from Telefonica. Colin had been active in a number of standards organisations over many years.

Membership Matters

GCF has welcomed the following new members since the last edition of Certification News:

Manufacturers

- Bittium (Finland)
- China Bird, Hong Kong
- MobiWire, France

Associate Manufacturers

- iamplus electronics, USA
- Viptela, USA

Observers

- ArcLight Wireless, USA
- HCT, Korea

As at SG#66, GCF membership stood at 287 companies:

- | | |
|---------------------------|-----|
| ▪ Operators | 24 |
| ▪ Manufacturers | 74 |
| ▪ Associate Operators | 102 |
| ▪ Associate Manufacturers | 13 |
| ▪ Observers | 73 |



New Board member

At the Extra-Ordinary General Meeting held in Bangalore during SG#66, Filip Kruzela of Sony Mobile Communications Inc was elected as a manufacturer member of the GCF Board of Directors.



Future-proofing Certification

With the mobile eco-system undergoing significant change as “open market” devices take an ever larger share of global handset sales and traditional personal communication network usage is supplemented by machine-to-machine and connected devices linked to the Internet of Things, GCF continues to evolve and enhance its scheme to ensure it continues to add value to mobile device manufacturers, operators and end-users.

At the Extra-Ordinary General Meeting in Bangalore, India, two resolutions were passed to better align GCF’s Articles of Association with the evolving environment in which mobile devices are designed and manufactured:

Certified Platform

The first resolution laid foundations for the introduction of the new concept of platform certification currently being developed by GCF’s MMCP Task Force. Platform certification will allow test results to be re-used during the certification of any end device incorporating the platform.

A certified platform can be any combination of either software and/or hardware that is compliant with relevant GCF Certification Criteria and can then be used as a technical reference in an end-device.

The Platform Certification process will allow for multiple independent platforms to be integrated into a single end-device. An Assessment Capable Entity (ACE) will be required to assess integrations to ensure co-existence issues have been avoided.

The manufacturer of the Certified Platform will be required to define which of the test cases applicable to the platform’s functionality could not be impacted by integration and are covered by the Platform Certification. The integrator will be responsible for demonstrating compliance for all other test cases that aren’t covered by the Platform Certification.

Only full Manufacturer Members of GCF whose design, development and manufacturing processes are accredited to ISO 9001 will be entitled to certify platforms.

Further details on platform certification will be announced as work progresses within GCF.

Enhanced certification rights for associate manufacturer members

To bring in a wider range of industry stakeholders, the second resolution paves the way for making GCF Certification accessible to manufacturers of personal communication devices that have not yet completed the process of obtaining the ISO 9001 accreditation required for full Manufacturer Membership.

Such companies will be able to base their handsets or other personal communications devices on a mobile chipset or a certified module in contrast to current Associate Manufacturer Members who are restricted to certifying connected devices based on GCF-Certified modules. Different membership fees will apply to the two types of Associate Manufacturer Member.

All manufacturer members which do not hold ISO 9001 accreditation are required to use Third Party Assessment Capable Entity for guidance on their certifications. All required testing must be undertaken by GCF Recognised Test Organisations.

GCF Certification News is intended to provide an overview of the work of GCF and does not constitute a formal record of decisions taken at GCF meetings.

Members can access official records of all GCF meetings in the members' area of the GCF website.