



# Q&A

**WITH THOMAS ERICKSON, CHIEF EXECUTIVE OFFICER,  
CDMA CERTIFICATION FORUM (CCF)**

***In this issue of Africa Telecoms, we are focusing on 4G Technologies, both Wimax and LTE. The evolution path for CDMA technologies is towards LTE. Is this correct? What are the plans of the CCF moving towards that point of convergence?***

Yes, that is correct. The CCF certifies any device that incorporates CDMA. We are extending that capability to include ensuring proper interworking and inter-technology handoff between CDMA and LTE. To avoid duplication of testing, the CCF is leaving certification of LTE specific functionality to the GCF.

***What does the CCF contribute to the CDMA ecosystem?***

The CCF is a forum of CDMA industry's leaders that believe certification is a critical part of the before market process. We believe that by bringing to the market quality products that have been thoroughly tested and that all meet the same minimum requirements, we ensure consumers' satisfaction and networks' health thus making CDMA devices a symbol of quality. The objective of the CCF is to evolve its certification process so it always meets new industry standards and evolving technology.

***What is the relationship between the CCF and the CTIA Certification Program, and more specifically the CTIA Certification Programs CDMA Working Group that you co-chair?***

The CTIA certification program administers a number of certification programs for operators in North America to meet the specific needs of their markets. To this end, the CTIA works with the CCF to ensure devices meet both global CCF certification requirements plus North American specific certification requirements. The CDMA Working Group that I

co-chair focuses specifically on certification of CDMA devices for the North American market.

***Being an African focused magazine, how much work is the CCF doing in Africa? And can you specifically talk about any current projects in Africa that the CCF is working on?***

The CCF has been working actively with operators across Africa since the first CDMA networks were launched. We have worked closely with the Africa CDMA Forum to identify challenges specific to Africa. A key challenge has been the broad availability of quality handsets. To address this challenge, the CCF has visited numerous operators and vendors across Africa to educate them on how the CCF certification process provides the most comprehensive test solution to ensure only the highest quality handsets reach their markets.

However, the more price sensitive markets in Africa and other parts of the World require a more measured approach to quality, achieving a more affordable balance between the cost and quality of the device. To this end the CCF has recently launched a self-declaration process that gives vendors more control over the time and cost of certification testing. This enables vendors to deliver a higher quality device at an affordable price point.

***CDMA networks have always had a smaller market penetration than GSM networks worldwide, with a move to more digital 3G and 4G networks and a convergence of GSM and CDMA technologies into LTE. How will this affect the CCF in the future?***

For as long as there are devices in the market incorporating CDMA technology, there will be a need for CCF certification testing.

***Do you believe that the Wimax technology will be in the same position as CDMA technologies (having a smaller market penetration) in the future? What is the CCF's view on technologies options moving forward?***

CDMA technologies have a clear evolution path towards LTE and converging on 3GPP. The CDMA ecosystem addresses mass-market demands in voice and data while WIMAX may have a more niche focus.

***The CDMA ecosystem is an interesting one with Device Vendors and CDMA Operators having their own agendas and requirements. How does the CCF get involved in these relationships and how has the CCF improved the ecosystem?***

These individual agendas and requirements are exactly what drive the high time and cost of qualifying devices for market. The CCF provides a venue for operators and vendors from around the world to gather and identify challenges in qualifying a device for market. By implementing a common certification solution, the CCF has demonstrated a five-fold reduction in time and cost to test and approve a device for market.

To achieve even further savings, it is critical for operators and vendors operating across Africa to join the CCF now – to identify device quality challenges specific to the Africa market and work within the CCF to resolve those challenges.

***The CDMA ecosystem has various organizations working on the development and cohesion like the CDMA Development Group (CDG) of various parties within the ecosystem. Does the CCF work with the likes of the CDG, in what capacities do you work***

***together and are there any other organizations that you work with?***

The CCF works closely with organizations such as the CDG to ensure we're all focused on identifying and solving the greatest challenges facing the industry. The CDG has a number of efforts (e.g. Global Handset Requirements for CDMA) to identify and define feature requirements that are essential to the successful adoption of CDMA world-wide. The CCF develops certification solutions to ensure devices meet industry standards used to implement those requirements.

***The CCF has recently worked with the CDG and CTIA to successfully merge the now retired CDG 1, 2, 3 test process and the CTIA certification process into the CCF. This resulted in a single process for CDMA device certification world-wide.***

***The CCF states there will be various efficiencies garnered from using the CCF certification program like, time to market and cost savings for vendors. a/ How is this achieved? b/ What are the benefits for CDMA Operators in using the CCF processes?***

These efficiencies are achieved by operators and vendors agreeing on a common test plan and test process. This allows vendors to understand and master one set of certification requirements early in their device development process. With this knowledge, the vendor can ensure they will meet industry agreed upon quality requirements, greatly increasing the probability of hitting their market window. Meeting these quality requirements also reduces greatly the cost of customer support. Releasing quality products are a great way to ensure customers' loyalty and positive brand recognition.

Operators enjoy greater efficiencies in their acceptance



process. Devices entering their process are of a higher quality level resulting in as much as a 3-fold reduction in their acceptance test timeline. This frees their engineers to focus on more important tasks such as differentiating their services in a highly competitive market. Higher quality devices helps ensure customer access to their network and protection of their infrastructure investment. I invite you to visit our web site and hear advantages first-hand from Lou LaMedica, Director or Verizon Wireless' Device Evaluation and Implementation Laboratory.

*Earlier in the year, you were quoted as saying: "With LTE deployments augmenting CDMA2000 networks this year it's important that multi-mode devices be tested and certified to perform optimally across both technologies. Critical to seamless 3G and 4G interoperability is the interworking between multi-mode devices and their radio access networks. The completion and validation of our test platform will allow the CCF to provide the only comprehensive testing and certification process for CDMA2000 1X and EV-DO devices incorporating LTE by the end of 2010." Have you started testing Interoperability of devices between 3G and 4G LTE networks? Furthermore, have the results of these test been positive and what are the difficulties being faced by the manufacturers?*

The CCF is working to implement interworking certification solutions at the earliest opportunity. Test equipment vendors are presently working hard to deploy test solutions to support launching of multi-mode CDMA/LTE devices in the near future. Formal platform validation can begin as soon as these devices and test solutions become commercially available.

*Finally, what are your thoughts of the development of CDMA into LTE in Africa specifically? Considering that many African operators are still deploying 3G networks, is there a case for these operators to leapfrog 3G and start deploying 4G networks now as opposed to 3G networks?*

I don't see a compelling case for operators to leapfrog 3G networks across Africa right now. LTE spectrum in the majority of the countries is yet to be auctioned and may be some time until the regulators of these markets are ready. In more than half of the SSA market 3G spectrum is yet to be auctioned. Internet penetration in the region is still below 10% while voice is still below 50%. CPE cost is also a very strong commercial consideration that for some time held up the adoption of 3G in CDMA and WCDMA flavors, though this is no longer the case. **AT**

**A CDMA Certification Forum (CCF), held in China, 2008.**



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#### Multisource Telecoms (Pty) Ltd

Telephone +27 (0) 11 321 0333  
 Fax +27 (0) 11 440 3539  
 Email info@multisource.co.za  
 Mobile Website http://www.multisource.mobi

#### Multisource Western Cape:

Samantha Van Jaarsveld SA Dealer Sales Executive  
 Telephone +27 (0)21 555 1574  
 Fax +27 (0)21 551 0221  
 Mobile +27 (0)76 483 3580

#### Multisource KwaZulu Natal:

Daon Swanepoel SA Dealer Sales Executive  
 Mobile +27 (0) 84 555 0333  
 Email daon@multisource.co.za

[www.multisource.co.za](http://www.multisource.co.za)