

**Source:** 3GPP Marketing and Communications Officer

**Title:** LTE Branding for Release 13

**Agenda item:** 8.2

**Document for:**

Decision	
Discussion	X
Information	

**1. PCG#33 Action on brand evolution**

The discussion at PCG#33 resulted in the following action:

**Action PCG33/1:** Marcomms Officer to work with the TSG Leadership in order to define the LTE brand evolution ~~on the basis of Release 12 and Release 13 content~~ and to submit proposals to PCG#34 for approval [3GPP/PCG#33(14)15r1].

The PCG#33 draft report notes that the discussion concluded that *“...it was too early to agree on brand evolution until some clarity had been provided on the content of Release 13 and the enhancements that Release would bring...”*

This document will attempt to clarify the reasoning behind a recommendation that 3GPP Release 13 is the right starting point for a new marker, by providing more information on the following:

- Industry’s use of marketing terms “4.5G” and “Pre-5G”
- TSG Leadership’s guidance on a new LTE Marker
- The new brand name and logo
- What if we do not proceed?
- Further branding considerations beyond LTE

This discussion follows on from previous branding discussions at PCG, which have monitored the potential need for a new marker beyond LTE-Advanced.

This document does not try to re-visit those discussions in detail. Instead, a table of the key documents related to branding since PCG#29 is provided in Annex A.

## 2. Industry's use of marketing terms "4.5G" and "Pre-5G"

The LTE-Advanced branding has stuck firm, and we do not see any new "LTE" terms that describe a systems level evolution.

Two new Industry marketing terms, that do describe an evolution in the latter phase of LTE-Advanced, have appeared. The terms "4.5G" and "pre-5G" have been used a lot recently and give the impression of a distinctive evolution on LTE-Advanced but do not herald the start of the "5G" era.

Here are a few examples of the use of these terms – to put their meaning in to perspective:

"...Much more concrete and near term was the rise of 4.5G as a topic at MWC. **To be clear 4.5G is really just LTE-A**, but vendors are using the 4.5G along with a few other labels to communicate there is more to LTE-A than basic carrier aggregation. Depending on which vendor you ask 4.5G includes a mixture of 3GPP Rel. 12 through 14 features. These things include LTE-LAA, improved machine-to-machine communications, higher orders of MIMO and carrier aggregation, and improved HetNet performance. As 4.5G doesn't have an official definition not all vendors include Rel. 12 features in their discussions..." [Fierce Wireless - MWC 2015 RAN review – 5G, 4.5G, and some other random observations](#), March 11, 2015.

"With LTE-A getting ready to meet the IMT-Advanced requirements and fulfilling the role of promised '4G', we believe the next phase of evolution before 5G will be successful interworking of LTE and Wi-Fi networks. This whitepaper explores this feature, we call **4.5G**, in detail..." 3G4G Blog; [4.5G: Integration of LTE and Wi-Fi networks](#), June 2014.

"...For its part, Ericsson said it will add License Assisted Access technology into its small cell portfolio starting in fourth quarter of this year. The company also described LAA as a "**new 4.5G technology**..." Fiercewireless; [Ericsson, T-Mobile push unlicensed LTE into limelight as '4.5G' technology for IoT](#), January 6, 2015.

"...Expected to be commercialized in 2016, Huawei's **4.5G** research starts by looking at the ongoing 3G Partnership Project (3GPP) releases for LTE and LTE-Advanced. **4.5G standardization forms a part of this and is expected to be completed in 3GPP releases 13/14...**" [Huawei releases 4.5G Plan Ahead of Commercialization in 2016](#), October 2014

"...Note also that some of what Huawei is promising is on plenty of other road maps as well. 4TR or 8TR MIMO, with 256 QAM is exactly what Nokia announced it will have on demo at MWC – but **Nokia is not calling it 4.5G**. An air interface to support low power IoT is something Alcatel-Lucent is very keen on...

So if these features already "exist" in R13 and R14, and other vendors have or will have them anyway, then what is the need for the 4.5G term, if not for marketing? What Huawei means, perhaps, is that the technologies are real enough. This isn't just vapourware. But the term itself is, indeed, marketing. And that's OK, because it's possible the industry is going to need a name for something which is more than plain old LTE, but not 5G. EE, for instance, is already calling its Carrier Aggregation **4G+**, to differentiate it from plain old LTE..." The mobile network; ["4.5G – a term for the long term?"](#), February 2015.

Technology such as massive MIMO and multi-user shared access (MUSA), dubbed **pre-5G**, will bridge the gap between LTE and future telco standards, a ZTE executive has claimed. [Pre-5G tech will show the way to new telco standards](#), Claims ZTE, November 2014.

LTE for machine-to-machine communications, or LTE-M, is a new LTE variant and **pre-5G** technology that is to be integrated into 5G. It provides a battery life of more than 10 years, 15 dB additional coverage and minimal device costs, and is the key enabler for connecting the billions of sensors and machines to the network that are needed for the Internet of Things. **Nokia Networks** will demonstrate a live LTE-M solution prototype at the **Korea Telecom** booth at Mobile World Congress 2015. [Nokia press briefing](#).

The company said its plan would involve seamless networking between LTE-Advanced and any new radio technology; and would likely include Network Function Virtualization (NFV) capabilities to better manage the network. Park said SK Telecom would like to build a test network to showcase a pre-5G solution in 2018, with plans for a final rollout in 2020. PC magazine - [On the Road to 5G Networks](#)

These industry terms correspond neatly with our own discussions on the new marker. The Industry terms "4.5G" or "pre-5G" are popular, but may be considered as company specific. Providing a 3GPP standards term, for use by the whole community, would help companies to describe this set of advanced features in a neutral and well defined way.

**3. TSG Leaders guidance on a new marker**

The four TSG Chairmen have approved a PCG#34 contribution entitled “New LTE Marker” [1]. The document addresses the need to define whether LTE brand evolution may proceed for technology reasons.

~~Originally, the action from PCG was to study whether Release 12 and Release 13 content was sufficient. However, it~~ is recognised a matter of record that the Project under the guidance of PCG has already made a public statement that Release 12 is LTE-Advanced and no other LTE mark. It is therefore not appropriate to study the need for a new marker which begins at Release 12 completion.

The TSG Chairmen’s co-sourced PCG#34 document “New LTE Marker” gives an overview of the features in both Release 12 and Release 13 that - when considered as a whole - justify the introduction of a new marker at Release 13 completion.

**4. The new brand name and logo**

The window of opportunity is small – This new brand will cover Release 13 and Release 14 timeframes, so a launch and awareness campaign should not be put on hold. For this reason we are ready to go with the brand name LTE-extra, accompanied by a graphic logo for use on specification and report cover pages and for marketing use from immediately after PCG#34.



The TSG Leaders and the Marketing and Communications Officer support the new brand name and consultations at Mobile World Congress with prominent member companies has made us sure that we have a mark that can take us forward when promoting the evolution of LTE to external communities.

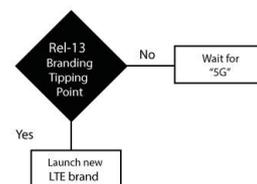
**5. What next if we do not to proceed with the new marker?**

We have discussed the need for a new marker since PCG#29 when our primary focus was to ensure that companies did not go beyond LTE-Advanced with marketing terms - not approved by the partners.

Subsequent discussions have focused on the need for our own marker beyond LTE-Advanced.

Release 13 is our final opportunity to have a distinct LTE brand for features enabled by its completion in advance of the “5G” era.

The Marketing and Communications officer recommends that if we cannot agree to proceed, at PCG#34, with a new marker - we should wait for the opportunity presented by 3GPP systems for “5G”, before we revisit this topic.



**6. Beyond LTE – Further branding considerations**

The next step in the process may be to consider the brand needs for the 3GPP contribution to “5G”, at the appropriate moment along the established RAN/SA timeline<sup>[2]</sup>.

These aspects are not covered by this document.

**7. Recommendations**

The time is right to define a new marker that promotes the continued evolution of LTE features with the completion of Release13.

Non 3GPP terms are starting to appear, that correspond neatly with this new marker. The Industry terms “4.5G” or “pre-5G” are popular, but may be considered as company specific, where as “LTE-extra” would be a standards term, for use by the whole community.

The recommendation of the TSG Chairmen and the Marcoms Officer is to proceed with a new marker for Release 13 LTE deliverables.

~~The Marcoms officer recommends that if we cannot agree to proceed at PCG#34 with a new marker we should wait for the opportunity presented by 3GPP systems for “5G” before we revisit this topic.~~

-[END]

<sup>[1]</sup> [3GPP/PCG#34\(15\)23](#) - The PCG document “New LTE Marker”

<sup>[2]</sup> [SP-150149](#), “5G” timeline in 3GPP

Annex A – LTE Branding documents to PCG since PCG#29

<a href="#">3GPP/PCG#29(12)14</a>	Comms Plan, 3GPP Marcoms Officer	See section 6.3 “LTE brand evolution”
<a href="#">3GPP/PCG#29(12)29</a>	TSG#29 minutes, Secretary	<b>PCG29/04:</b> Ad Hoc Group created, led by the 3GPP Marcomms Officer, to consider the brand evolution requirements for 3GPP.
<a href="#">3GPP/PCG#30(13)09</a>	3GPP LTE Brand Evolution, 3GPP Marcoms Officer	SWOT on options for Rel-12 branding, including; “Do not evolve 3GPP LTE brand now”. PCG agreed that, at this moment – December 2012 / January 2013 - there is no immediate call for a re-branding beyond LTE and LTE-Advanced.”
<a href="#">3GPP/PCG#30(13)27r1</a>	TSG#30 minutes, Secretary	<b>PCG30/2:</b> PCG Ad Hoc Group to continue to monitor the manner in which the market place uses the LTE name.  <b>PCG30/3:</b> Marcomms Officer to prepare and disseminate a public statement from 3GPP on the matter of terminology of LTE.  <b>PCG30/4:</b> Marcomms Officer to inform the companies using other terminology that LTE and LTE-Advanced of the 3GPP position in this respect.  <b>PCG30/5:</b> Marcomms Officer to report the findings of the PCG Ad Hoc Group findings to the October 2013 PCG meeting.
<a href="#">3GPP/PCG#31(13)16</a>	Consideration on 3GPP LTE Brand Evolution, CCSA	“LTE Advanced phase2 starts at 2014-2015, it is more likely a 4.5G concept rather than 5G. It will be clearly differentiated from 5G and leave room for further brand evolution.”
<a href="#">3GPP/PCG#31(13)19</a>	Findings of the PCG Ad Hoc Group on LTE brand evolution , 3GPP Marcoms Officer	“We (3GPP) have to decide whether we wish to move forward on this type of branding in a collective and planned way in the future. The window of opportunity is small, and it is now. A delay in 3GPP taking a lead may see more companies going unilaterally forward with their own branded evolutions – based on 3GPP Releases.”
<a href="#">3GPP/PCG#31(13)32r1</a>	TSG#31 minutes, Secretary	<b>PCG31/1:</b> PCG Brand Evolution Ad Hoc Group to continue to monitor the manner in which the LTE and LTE <u>Advanced</u> Brands are used by industry and to prepare proposals as to how those brands should evolve
<a href="#">3GPP/PCG#32(14)18</a>	Branding Ad-hoc Group status and activity, 3GPP Marcoms Officer	First appearance of “5G” in the discussion.  “This Report recommends that 3GPP establishes a new Industrial marketing phase of LTE, to allow the industry to be able to differentiate their LTE, LTE-Advanced and future LTE features.”
<a href="#">3GPP/PCG#32(14)15</a>	A new “Marker” for LTE, TSG RAN Chairman	“The document motivated the introduction of a new marker to advertise LTE Rel-12 and beyond. “
<a href="#">3GPP/PCG#32(14)19</a>	Proposals on 3GPP LTE Brand Names, CCSA	“Agree on creating new names/marker for subsequent milestone/phase of LTE-Advanced...”
<a href="#">3GPP/PCG#32(14)29</a>	ATIS Views on LTE/LTE-Advanced Marker, ATIS	“ATIS recommends that any further <u>discussion</u> on a potential new marker beyond LTE-Advanced should be <u>postponed until the completion of the Release 13</u> when we know its actual content much better.  ...ATIS recommends that the PCG continue to strongly discourage the introduction of alternate LTE markers and terminology within the industry that have not been developed by 3GPP and agreed by the PCG beyond the accepted “LTE” and “LTE-Advanced” markers.”

<a href="#">3GPP/PCG#32(14)35r2</a>	TSG#32 minutes, Secretary	<b>PCG32/1:</b> PCG Brand Evolution Ad Hoc Group to re-consider whether there is a compelling need for a new marker, based on the expected evolution of 3GPP release content, including an analysis of the pros and cons of developing a new marker and an assessment of the impact that it would have on 3GPP as a whole and for industry
<a href="#">3GPP/PCG#33(14)15r1</a>	Branding Ad-hoc Group status and activity, 3GPP Marcoms Officer	SWOT on the Pros and Cons of developing a new marker and an assessment of its potential impact on 3GPP and external stakeholders.  "It is too soon (October 2014) to decide whether the brand evolution should take place at Release 13 completion, or not.  It is envisaged that TSG#65 and TSG#66 approve the major part of the Release 13 Work Items. These decisions will enable the TSG leadership to evaluate and advise on the technical viability of an evolved brand."
<a href="#">3GPP/PCG#33(14)25</a>	Consideration on LTE Brand Evolution, CCSA	"..If we make the final decision on this new brand in the latter part of R13 in 2015., there will be a highly risk that the operation room for this new brand is quite limited due to the coming of 5G. Therefore, it is important to introduce a new brand for the market evolution of LTE-advanced at this stage, and leave enough time for the whole industry to advertise and utilize this new brand. Otherwise, late decision will miss the proper opportunity of LTE further evolution promotion."
<a href="#">3GPP/PCG#33(14)35</a>	TSG#33 minutes, Secretary	<b>PCG33/1:</b> Marcomms Officer to work with the TSG Leadership in order to define the LTE brand evolution <del>on the basis of Release 12 and Release 13 content</del> and to submit proposals to PCG#34 for approval