

**Source:** MCC  
**Title:** Minutes of Future Evolution Workshop  
**Document for:** Approval  
**Agenda Item:** 8.9

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## 1. Opening of the meeting

The Future Evolution Workshop kick-off meeting took place on Monday, September 9<sup>th</sup> 2002, 4pm to 8pm. It was chaired by Mr Hiroshi Nakamura, NTT DoCoMo, SA vice-chairman, and was supported by Mr Alain Sultan, MCC.

The agenda was already approved at TSG SA#16, and was confirmed at the beginning of the meeting. It was available as EV-020001.

Note on the terminology used in these minutes:

- "workshop" refers to the meeting reported by these minutes.
- "ad-hoc" refers to the regular long-term evolution meeting, which might take place at each TSG-SA plenary meeting.

## 2. Approval of the agenda

EV-020001, *Agenda*, Source Convenor

The scope of this kick-off workshop, already agreed in TSG-SA#16, is to define the Term of Reference (ToR) of the long term future evolution ad-hoc, to organize the work and to agree on potential deliverables and time schedule of the ad-hoc.

**Conclusion:** Approved.

EV-020013, *Summary of e-mail discussions*, Source Convenor

During the e-mail discussions, ideas on the Term of Reference and on the working methods for the future evolution ad-hoc were presented. These discussions are summarized in this contribution, but the Term of Reference and working methods were reviewed more in depth later on, as they are the subject of this kick-off workshop and so are addressed by several contributions.

**Conclusion:** Noted. See these present minutes for the conclusions on ToR, Working Methods and Time Schedule of the long term evolution ad-hoc group.

## 3. Elaboration of proposal for ToR for future evolution work

EV-020005, *Terms of Reference for the 3GPP ad-hoc Evolution Group*, Source D Barnes (DTI, UK)

This document proposes some guidelines to elaborate the ToR, which are:

1. *The ToRs should be based on inputs from other fora that have already looked at the future evolution of IMT-2000. This should include the ITU-R and ITU-T "Vision Documents" along with the output of research bodies such as WWRF.*

2. *The ad-hoc group should also take into account the output from the 3GPP Helsinki Workshop.*
3. *The 3GPP evolution ad-hoc group should define the initial version of a long term high-level road map to guide the future work plan for the 3GPP TSGs.*
4. *The high-level road map should be a “living document” that can be updated periodically to reflect future developments and innovation. The document should not duplicate work already undertaken, rather it should focus on those items which are pertinent to the evolution of 3GPP standards arising from the work of other fora.*
5. *A convenor has already been appointed for the first two meetings of the ad-hoc group and a chairman should be appointed after this time by the usual TSG procedures.*
6. *The ad-hoc group should develop its working methods to achieve the aims of the group.*
7. *A set of time scales for the completion of the work of the ad-hoc group should be defined.*
8. *The ad-hoc group should operate under normal TSG procedures.*
9. *The ad-hoc group should report to TSG SA Plenary meetings.*

**Discussion:** A general comment is that "TSG procedures" should be replaced by "3GPP procedures", as the procedures are defined for 3GPP and not for each individual TSG.

On bullet 1, H3G wanted to stress that ITU-T and ITU-R are not the only fora from which inputs should be taken into account.

On bullet 4, "The document should not duplicate work already undertaken, rather it should focus on those items which are pertinent to the evolution of 3GPP standards arising from the work of other fora", Nokia and H3G stressed that external outputs should be considered in the same way as 3GPP internal inputs. On the concept of "duplication", Nokia said that some duplications might be needed, e.g. when selecting one option among several ones proposed by other standard(s). This was agreed, but it was clarified that the statement has to be understood in the sense that the main lines should not be duplicated. The statement "arising from the work of other fora" is also confusing because it seems to forget to include the 3GPP results.

Lot of discussions took place on the exact wording of bullet 4, in particular on the relationship between the work to be done by the long term evolution ad-hoc group and the work to be done by external bodies.

**Conclusion:** a (sub) drafting group will propose sentence(s) to replace bullet 4, on the basis of the agreement that the work made by external bodies shall be efficiently re-used by this ad-hoc group, without excluding any "3GPP internal" results.

EV-020009, *Draft ToR*, Source Convenor (extracted from e-mail discussions)

The convenor proposes that bullets 3, 4, 6 and 9 of the previous document become the ToR of the long term evolution ad-hoc.

**Discussion:** The comments on bullet 4 of document EV-020005 detailed just above also apply to bullet 2 of this one.

The level of details to be considered by the ad-hoc was questioned: should it identify market trends or should it go more in the details of the technical solution? For the convenor, the ad-hoc

should identify the technologies but not go into the details of these technologies: this task is left to TSGs.

AWS propose to work on the table of content of the long-term document, and this table will provide guidance on how to further contribute to this group. This opinion was shared by Orange.

EV-020003, *Long-Term evolution ad-hoc group - Proposed Terms of Reference*, source DTI, Hutchison 3G, mmO2, T-Mobile, Orange, Vodafone

The document defines a purpose of the ad-hoc long-term evolution group, clarifying the Governance, the Inputs and Sources of information and the expected deliverables.

**Conclusion:** Noted.

#### ***Conclusion on the ToR of the long term evolution ad-hoc meeting***

The exact ToR will be elaborated off-line by a sub-drafting group.

This ToR shall be based on document EV-020009 and shall focus on the following points:

- The group should create a long term high-level roadmap to identify the "concepts" or "trends" to be used by 3GPP, without entering in the detailed technologies. When the roadmap is judged stable, the work will be transferred to the TSGs and will follow the classical the 3GPP procedures, i.e. the TSGs might decide to have the technical work performed by the WGs.
- Inputs from external bodies but also from within 3GPP shall be considered.
- The ad-hoc group should report to TSG SA Plenary meetings.

The results of the sub-drafting group are reproduced in annex of these minutes.

## **4. Organization of work**

EV-020010, *Draft Working methods*, Source Convenor

This document proposes some working methods, extracted from EV-020005 and EV-020013.

**Discussion/Conclusion:** There is no need to define specific Working Methods for the long term evolution ad-hoc group: as part of 3GPP, it will follow the classical 3GPP Working Methods.

## **5. Identification of related work in outside bodies, e.g. ITU and the relevant to the future evolution work**

EV-020004, *Preliminary draft new Recommendation (PDNR): Vision framework and overall objectives of the future development of IMT-2000 and of systems beyond IMT-2000*, Source ITU-R WP8F

This document is the "long-term vision" of ITU-R, provided for information. It might consist in a valuable input to the long term evolution ad-hoc group.

**Conclusion:** noted.

#### *Other comments on external fora*

ITU-R, ITU-T and WWRF are identified at present as the three external bodies working on issues related to the long term evolution ad-hoc. This list is not limitative and might evolve, e.g. the work of other bodies might be identified and potentially re-used later on, like what might be done by OMA. The convenor clarified that this "identification of work done by external fora" has not to be considered as a bundling meaning: it is just a matter of collecting or simply identifying useful information.

Nokia and Rogers Wireless wish to stress that the main source of information should still be 3GPP, without precluding the use of external material from other fora.

For mmO2, the identification of information relevant to this ad-hoc and related fora will be clearer as soon as the content of the long-term roadmap document will be established.

## **6. Preliminary identification of deliverable**

EV-020002, *3GPP Long-Term evolution Ad-hoc Group - Proposed scope and content of long-term high level road map*, Source DTI, Hutchison 3G, mmO2, T-Mobile, Orange, Vodafone  
This document proposes a first draft table of content for the "long-term high level road map" document. The proposed content is:

1. *Purpose of the high level road map*

2. *Executive summary*

3. *Drivers & influences*

*For each of the following subject areas, identify and briefly describe the potential / likely relevance of current / planned trends and/or activities.*

3.1 *Business drivers*

3.2 *Regulatory*

3.3 *Spectrum*

3.4 *User equipment & user expectations*

3.5 *Radio technology*

3.6 *Core network*

3.7 *Service provision*

3.8 *Operations Support Systems*

3.9 *Techniques for standards production*

This high level roadmap should take into account all known developments that could influence the 3GPP technical standard for the next six to seven years.

**Discussion/Conclusion:** Noted. Already seen at previous SA meeting.

EV-02007, *Preliminary identification of deliverable*, Source H3G

This document proposes that the high level road map will contain two parts: 3G Enhancements (short to medium term evolution), and Long Term Evolutions.

Examples of short to medium term evolutions are IMS Optimisation, 3GPP & 3GPP2 Core Network Harmonisation, Optimised QoS, etc.

Examples of long-term evolutions are new and adaptive radio access techniques, higher data rates in multi-user and multi-cell environments (e.g. up to 100 Mb/s), efficient and effective use of spectrum (Dynamic spectrum sharing and allocation), etc.

A series of trends to be considered when investigating these fields is also identified.

**Discussion:** For Vodafone, there will be a constant demand for higher bit rates, as it has been the case for at least the past 10 years. However, due to economical considerations, the final result might be that whatever future technology offering higher data might be available just in some hot spots, "3G" will be available in many places and 2G will be used as a fallback solution. This explains why an evolutionary approach has to be considered, reusing and completing as much as possible the existing infrastructure.

### **Conclusion on the content of the roadmap document:**

It is concluded to take the table of content as provided in document EV-020002, with the following modifications:

- a list of objectives should be added before section 3.1. This list can be taken out of document EV-020007.
- Section 3.4 ("User equipment & user expectations") should be divided in 2 separate bullets.

The deliverable will be a technical report, to be approved by SA, as suggested in tdoc EV-020006. It is premature to decide whether it will be for publication (900 series) or not for publication (800 series).

## 7. Time schedule

EV-020014, *Timing and Contents of UMTS Evolution*, Source Orange

This contribution aims to stress the fact that the technology content and timing to commercial enabling of UMTS evolution will be critical at all times.

It states that UMTS as to be used as the preferred platform for long-term evolution and innovative features of 3G, that long-term specification outputs should include recommendation for optimum Engineering design, that the long-term architecture document should be considered as a guide (i.e. not to be too precise on the content of each release), and that Specs contents should be delivered in a way that Core and RAN or Terminal releases do not unnecessarily restrict each other, but exploit modularity at all times.

**Conclusion:** Noted.

EV-020006, *3GPP SA Long Term Evolution ad-hoc group - Possible schedule*, Source Neil Lilly

Mr Lilly presented one slide on a time schedule for the elaboration of the Roadmap document: main steps are to decide its structure by December, have it in version 1 in March, and have it in Version 6 or 7 (and not version 3 as stated in the slide) in June next year.

**Discussion:** The Convenor noticed that tdoc EV-020003 says March whereas this one says June for stabilization of the document. The information contained here is more accurate, as it was provided later, the contributor explained.

**Conclusion on Time Schedule:** The conclusion on time schedule are that:

- The expected date for the first stable version of the long-term roadmap is -at this point- June 2003.
- A face-to-face meeting will take place every 3 months in conjunction with TSG-SA meeting. It is then asked to TSG-SA to assign time for this ad-hoc in every TSG-SA meeting.
- Between face-to-face meetings, e-mail discussion will be held through the e-mail reflector.
- The working methods will be clarified in later discussion after completion of the 1st deliverable.

In addition, the long-term evolution ad-hoc group will consider the necessity of having specific meeting(s) as the "Future Evolution Workshop" held last year in Helsinki. This remains to further discussion.

## 8. A.O.B.

EV-020008, a one-slide untitled document, Source Giulio Pagano

The document consists in just one funny slide, showing a bubble called "Shared Network", pointed by 3 arrows originating from a "customers" area, and from which 5 arrows go to 5 "operator" bubbles.

**Conclusion:** There was nobody to present it, the document is noted.

*Other discussions*

Vodafone pointed that the concept of "4G" is not defined. What 3GPP is defining is 3G, and this might encompass some ways of having higher data rate and/or to use new frequencies. So the

distinction between "generations" is quite arbitrary, it might be considered even as a marketing problem. Nokia's understanding is that 3G has to be re-used in the future as much as possible, up to 1000 of Mbit/s if possible.

## **9. Conclusion**

The workshop enabled to conclude on some basic agreements on the Terms of Reference of the long term future evolution ad-hoc, even if the exact wording has still to be drafted off-line.

It also concluded that the work to be performed by the ad-hoc group should be focused on the elaboration of the long-term roadmap, which first table of content was provided by this workshop. This roadmap will be a Technical Report.

The convenor thanked the delegates for their participation, and encouraged them to further progress the issue by e-mail, using the Future Evolution reflector.

Annex: ToR as proposed by the drafting meeting  
Proposed Draft ToR

- The 3GPP evolution ad-hoc group produces the initial version of a long-term high-level road map to guide the future work for 3GPP.
- The ad-hoc focuses on items, which are pertinent to the evolution of 3GPP specifications.
- The high-level road map is envisaged to be a “living document” that can be updated to reflect future developments and innovation as necessary.
- Technical work based on the road map should be conducted by TSGs through normal 3GPP working procedures.
- The ad-hoc group reports to TSG SA Plenary meetings.