



1 **Working Party 8F**

2 **WG Vision DG2**

3 **CHAIRMAN'S MEETING REPORT**

4 WG Vision DG 2 met during two periods of the 6th meeting of WP8F. The drafting group
5 considered matters relating to WRC-03, and three of the agenda items in particular:

6 **1) WRC-03 Agenda item 1.3**

7 Document 462 (CAN) proposed that WP 8F should develop a liaison statement to WP 8A, bringing
8 to their attention the ongoing work on IMT-2000 and beyond and its potential for the provision of
9 some aspects of the requirements identified within WRC-03 agenda items.

10 A sub-drafting group was formed under the chairmanship of Sabah Towajj (Canada) to develop this
11 liaison statement. Some editorial changes were made by DG2, and it was agreed that the revised
12 version (Doc. 8F/TEMP/201(Rev.1)) be submitted to WG Vision for approval, to be sent to WP 8A.
13 It was approved by WG Vision, with the addition of contact information, as 8F/TEMP/201 Rev.2.

14 **2) WRC-03 Agenda item 1.21**

15 A draft of a liaison statement to JTG 1-6-8-9 was carried forward to the sixth meeting as attachment
16 3.4 to Document 8F/375 (report of the 5th Meeting). Document 8F/442 (UK) proposed some
17 additional text to complete the liaison statement and to make editorial improvements.

18 A sub-drafting group was formed under the chairmanship of Tim Hewitt (UK) to consider
19 Document 8F/442, as well as other editorial improvements. Some editorial changes were agreed by
20 DG2, and it was decided that a further sentence should be added to the introduction on the first
21 page. The revised liaison statement was submitted to WG Vision for approval. It was approved with
22 some further editorial changes as Doc.8F/TEMP/187 Rev.2, and it was agreed that it should also be
23 sent to WP 8A and JRG 8A-9B.

24 **3) WRC-03 Agenda item 1.22**

25 Document 8F/432 (Japan) proposed text for the CPM Report for WRC-03. This text is consistent
26 with the structure for the text in Annex 1 to Attachment 3.3 of Document 8F/375. Much of the text
27 in Doc. 8F/432 was also contained in Doc. 8F/431 for inclusion in PDNR [IMT-VIS]. At the first
28 meeting, it was decided that the drafting group should consider the working documents of DG1 as
29 they further developed PDNR [IMT-VIS].

30 The chairman of DG2 prepared a working document for the second meeting that took account of
31 Document 8F/432, the progress in DG1, and comments made by delegates at the first meeting. This
32 document divided the text into sections, and made a text proposal for each section. The second

1 meeting of DG2 did not have sufficient time to consider the document fully. The text was reviewed
2 from the perspective of including the relevant parts of the input contribution, working draft
3 documents from DG1, and comments from the first meeting. However, there was not sufficient time
4 to review the resulting text or to develop it as draft text for the CPM report.

5 WG2 concluded that the draft text is not sufficiently well developed to be forwarded to WG Vision
6 at this meeting. It is therefore included in this report (as Annex 1) so that it can be further developed
7 at the 7th Meeting of WP 8F. It must be emphasised that the text in annex 1 has not been approved
8 by DG2.

1 ANNEX 1

2 **Working draft Text for Section 7.2 of CPM Report to WRC-03**

3 **Introduction**

4 The text below was developed by WG Vision DG2 during the sixth meeting of WP 8F. Most of the
5 proposed text was also considered in separate contributions towards the PDNR IMT-VIS. DG2
6 therefore aligned the draft text with the work of DG1. However, it did not have time to consider this
7 text in detail in the context of the CPM Report, or to align the text with the final output of DG1.
8 DG2 has identified that further information is needed, as indicated by the text specifically shown in
9 square brackets. However, the whole text should be considered as being in square brackets, and
10 further contributions are invited on the whole text at the next meeting.

11 It is intended that this text will be merged with the text developed by WG Spectrum at that meeting.
12

13 **PROPOSED TEXT ELEMENTS FOR CPM TEXT FOR WRC-03**
14 **AGENDA ITEM 1.22, FUTURE DEVELOPMENT OF**
15 **IMT-2000 AND SYSTEMS BEYOND**

16 **7.2 Agenda item 1.22 - Consider progress on ITU-R studies concerning future**
17 **development of IMT-2000 and beyond**

18 **7.2.1 Introduction**

19 [Text for these sections is being developed by WG Spectrum]

20 **7.2.2 Summary of technical and operational studies, including a list of relevant ITU-R**
21 **Recommendations**

22 **7.2.2.1 Introduction**

23 The number of subscribers for mobile communications has increased much faster than predicted,
24 particularly for terrestrial use. In the year 2000 the number of mobile subscribers was higher than
25 400 million worldwide and for the year 2010 more than 1700 million mobile subscribers are
26 anticipated.

27 With IMT-2000 systems the combination and convergence of the different worlds, Information
28 Technology (IT) industry, media industry and telecommunications, will integrate communication
29 with IT. As a result, mobile communications together with IT, mobile IT, will penetrate into the
30 various fields of the society, making mobile IT widespread.

31 In future communications, two economically contradictive demands will arise; ubiquity and
32 diversity. Open, global and ubiquitous communications make people free from spatial and temporal
33 constraints. Versatile communication systems will also be required to realize customized services
34 based on diverse individual needs. The flexibility of mobile IT can satisfy these demands
35 simultaneously. Therefore, mobile IT can be seen to play a key fundamental role in the 21st
36 century.

37 The majority of traffic is changing from speech-oriented communications to multimedia
38 communications. The role of IP based data traffic will dominate in the future. Due to this, networks

1 and systems must be designed to transfer economically packet data. The new anticipated data
2 services will consume much of the bandwidth. This results in high data-rate requirements for future
3 systems.

4 Systems beyond IMT-2000 are realized by functional fusion of existing, enhanced and newly
5 developed elements of high mobility mobile systems (generally known as cellular systems), nomadic
6 wireless access systems and so forth with highly mutual affinity. Perspectives of the enhanced and
7 newly developed elements can be summarized by the following:

8 1) As Systems beyond IMT-2000, enhanced IMT-2000 and new elements of systems beyond
9 IMT-2000 will have the capability to interwork with one another and also with the other systems.

10 2) The enhanced IMT-2000 will raise service bit rates to about [value to be added] in around
11 [date to be confirmed].

12 3) The new elements of Systems beyond IMT-2000 will support service bit rates of about
13 [value to be added] in around [date to be confirmed].

14 **7.2.2.2 Future development of IMT-2000**

15 A key element of the high level vision for the ongoing development of IMT-2000 is that there will
16 be a steady and continuous evolution and enhancement of IMT-2000 capabilities by operators
17 deploying and upgrading, separately, their chosen IMT-2000 technologies over at least
18 the next 10 years. This would then be followed by further operation for possibly a further 10 years.

19 Terrestrial IMT-2000 systems are being enhanced and for instance many will incorporate an "All
20 IP" network and the wireless access will offer increased capabilities such as up to [value to be
21 added]. These are only initial enhancements, anticipated to be standardised by early in the year
22 2002, with further enhancements envisaged beyond this, such as the support of service bit rates of
23 up to [value to be added] under favourable circumstances.

24 For further global and economical success of the IMT-2000, further enhancement of IMT-2000
25 should primarily consider upward compatibility with the initial IMT-2000 radio interfaces and with
26 frequency identification and usage for IMT-2000 (WARC-92, WRC-2000).

27 The satellite component of IMT-2000 may further evolve to provide services in areas covered by
28 high mobility mobile systems (generally known as cellular systems), complementary services, e.g.
29 broadcasting, multicasting, and in those areas not planned for service by terrestrial systems.

30 The convergence of services and delivery platforms in the future development of IMT-2000 will
31 lead to more intelligent use of the communications media, where IMT-2000 will be able to offer the
32 users what they need in any specific mobile environment. The range of applicability of IMT-2000 is
33 very much wider than earlier mobile systems and is expected to include future enhancements which
34 will offer increasingly superior capabilities and performance in low mobility environments.

35 **7.2.2.3 Systems beyond IMT-2000**

36 Systems beyond IMT-2000 will provide highly sophisticated services, which are beyond what can
37 be achieved by the evolution of IMT-2000. There may be a requirement for a new wireless access
38 technology, particularly for the wide area mobile (generally known as cellular) component.

39 Systems beyond IMT-2000 will handle a wide range of supported data rates according to economic
40 and service demands with [a maximum data rate] of greater than [value to be added] for systems in
41 multi-user and multi-cell environments and with terminals moving at vehicular speeds and support
42 [data rate value to be added] maximum.

43 Because the capabilities of systems beyond IMT-2000 will be beyond those of enhanced IMT-2000
44 to support new applications and market opportunities not likely to be provided by IMT-2000,

1 systems beyond IMT-2000 will likely deploy wireless access method distinct from those in
2 Recommendation ITU-R M.1457 and an additional spectrum beyond those identified at WARC-92
3 and WRC-2000 may need to be available for them.

4 Many types of access systems will be connected to a common, flexible and seamless core network.
5 The mobility management will be part of a new wireless access system as an interface between the
6 core network and a particular access technology to connect a user via a single number for different
7 access systems to the core network. This will correspond to a generalized access network. Global
8 roaming for all access technologies is required. The interworking between these different access
9 systems in terms of global roaming, inter-system handover and seamless services with service
10 negotiation including mobility, security and QoS will be a key requirement, which will be handled
11 in the newly developed wireless access systems and core network.

12 **7.2.2.4 Related Recommendations**

- 13 – Vision and overall objectives of the future development of IMT-2000 and of systems
14 beyond IMT-2000: Recommendation ITU-R M.[IMT.VIS];
- 15 – International Mobile Telecommunications-2000 (IMT-2000): Recommendation
16 ITU-R M.687-2;
- 17 – International Mobile Telecommunications-2000 (IMT-2000) for developing countries:
18 Recommendation ITU-R M.819;
- 19 – Framework for modularity and radio commonality within IMT-2000: Recommendation
20 ITU-R M.1311;
- 21 – Detailed specifications of the radio interfaces of IMT-2000: Recommendation
22 ITU-R M.1457.

23 **7.2.3 Analysis of the results of studies related to the further development of IMT-2000 and** 24 **systems beyond IMT-2000**

25 **7.2.3.1 Preliminary studies of spectrum requirements**

26 [Text for this section is being developed by WG Spectrum]

27 **7.2.3.2 Particular requirements of developing countries**

28 *Ed's Note: Information from WG-DEV is requested.*

29 **7.2.3.3 Progress towards potential frequency ranges for spectrum**

30 [Text for this section is being developed by WG Spectrum]

31 **7.2.3.4 Relationship with studies documented under CPM Section 7.1**

32 [It is not yet known whether any text will be required in this section. If needed, any text will be
33 developed at the next meeting of WP 8F]

34 **7.2.4 Methods to satisfy the agenda item and the advantages and disadvantages**

35 [Text for this section is being developed by WG Spectrum]

36 **7.2.5 Regulatory and procedural considerations**

37 [Text for this section is being developed by WG Spectrum]

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