Software Defined Radio Forum Contribution

Committee: Entire SDRF Membership

Title: SDR Forum contributions to the ITU-R Working Party 8F

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Distribution: Ballot distribution to members only

Document Summary: This cover sheet and the following pages are for the internal use by the SDR Forum membership in reviewing and approving the two documents for ballot:

1. Letter to ITU with Attachment A: "Working Document Towards Preliminary Draft New Recommendation Software Defined Radio and Related Technologies M.[IMT-SDR]."
2. Letter to ITU with Attachment B: "Information from SDR Forum on Download and Regulatory Issues for Software Defined Radio."

3. This material was prepared at the direction of the SDR Forum under contract initiated by the SDR Forum Board of Directors.

Notes of importance: The attached documents that are submitted for membership approval are consistent with the correspondence between the SDR Forum and the International Telecommunication Union Radiocommunication Bureau (ITU-R). Specifically, the SDRF in a letter dated 16 January 2001 to Mr. Robert Jones, ITU-R Director, stated in part:

> The SDR Forum "will be reviewing Question 230/8 to determine how we might address the Question in our work. As we proceed with our activities on software defined radio, we will appropriately correspond with the ITU Radiocommunication Sector to inform you of our workplans, our progress, and to offer the Forum's views on SDR to the ITU-R as it is being deliberated within its respective Working Parties."

Question 230/8 is the "Question" on software defined radio, i.e., it is the high-level description of work objectives on software defined radio.

Impacts/Effects: The submission of these documents to the ITU-R greatly enhances the visibility of the SDR Forum in the international standards community.

Action Desired: Approval of the two contributions for submission to the ITU-R Working Party 8A and 8F Meetings in Geneva in September-October 2002. ITU-R submission deadline is Monday 9 Sept 2002 at 17:00 hours Geneva time.

Action Required for Closure: Ballot approval of the two attached documents.

Desired Disposition Date: Wednesday 4 September 2002 5 PM EDST (to allow time for any final edits)

NOTICE

Information Relevant to the Balloting of SDRF Contributions to ITU-R WP 8F

1. Foreword

This material was prepared at the direction of the SDR Forum under contract initiated by the SDR Forum Board of Directors. Contract oversight officers for this task are Stephen Blust, Mike Chartier and Al Margulies. The Board has concluded that SDR Forum should be a catalyst to move SDR forward in the ITU-R, and to ensure that the views of the Forum, where the industry leading efforts are being developed by the Forum's members, be incorporated into the ITU-R work.

2. Background

This material was prepared at the direction of the SDR Forum under contract initiated by the SDR Forum Board of Directors. Contract oversight officers for this task are Stephen Blust, Mike Chartier and Al Margulies.

The ITU-R Working Party 8F (WP 8F) and Working Party 8A (WP 8A) have been jointly assigned a Question[1] on software defined radio. WP 8F is responsible for IMT-2000 and Systems Beyond IMT-2000, while WP 8A is responsible for land mobile service including public safety mobile service. Documents, such as any reports or recommendations on topics such as SDR, are sent between WP 8A and WP 8F via official liaisons.

ITU-R Working Party 8F has started a report on Technology Trends. Software defined radio is a major portion of this ITU-R Report. The United States has already suggested (as part of an input contribution), that a separate report or recommendation on SDR be developed. In other words, the U.S. has previously suggested that the information on SDR currently contained in the Technology Trends Report be extracted and placed into a separate document that would be the foundation for an ITU-R report or recommendation on SDR. The contribution by the SDR Forum to the ITU-R entitled, "Working Document Towards Preliminary Draft New Recommendation Software Defined Radio and Related Technologies" is this foundation for this new ITU document on software defined radio.

Other countries (administrations) and industrial (sector) members have in the recent past submitted material to WP 8F on SDR. While there is support in the ITU-R for SDR and the interest level is rising there is a need for further impetus and a leading catalyst to move it forward and to consolidate these views, plus the views of the Forum, where the industry leading efforts are being developed, should be incorporated into the ITU-R work.

3. SDR Forum Contributions to the ITU-R Working Party 8F Meeting 25 September to 2 October

2.1 Contribution "Working Document Towards Preliminary Draft New Recommendation Software Defined Radio and Related Technologies"

- Purpose: To assist ITU-R WP 8F to develop an ITU-R Recommendation, "Software Defined Radio and Related Technologies". The recommendation is needed to ensure that the benefits of SDR technology are fully realized and accepted globally. Certain issues

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[1] The term "Question" is used in the ITU to define a work programme in very high level terms. The text for the "Question" on SDR may be found at:
http://www.itu.int/ITU-R/study-groups/sg/sg8/Questions/question_itur_230_8.html

such as dynamic spectrum allocation/spectrum resource sharing need to be addressed by international organizations such as the ITU-R that is responsible for spectrum allocations. One key purpose of the recommendation will be to set the long-term direction of the wireless community for resolving the complex issues associated with dynamic spectrum allocation/spectrum resource sharing. However, the Recommendation will address other issues as well. In the contribution, the SDR Forum does not, at this time, establish any Forum position on any issues other than the fact that a separate ITU-R Recommendation on SDR should be created.

- Structure: There is a cover letter to the ITU that is followed by the contribution itself. The contribution consists of an Introduction, Discussion, and Recommendations and is followed by an attachment. The attachment is the SDR Forum recommendation for the structure of the new recommendation on SDR. The structure of the recommendation itself is the body of the recommendation with a detailed annex.

- Content:

    a) In the proposed Recommendation document, there is new information in the "Considerings" and "Recommends" portion of the proposed recommendation. However, there is an editor's note explaining that these are examples and therefore subject to further review and change. This does not establish an SDR Forum on this text.

    b) The detailed information in the annex of the recommendation consists of text that has been brought previously into the SDRF as an input contribution to the Forum (Dallas Meeting, input document 2002-007). This content is still open to review and further comment within ITU-R WP 8F; therefore placing this information in the new recommendation is simply a matter of formatting and does not imply SDR Forum agreement or disagreement with this material. Future input contributions can be contributed against this text.

    c) It is the intent that the Forum's 2002 deliverables and the 2003 Workplan activities will be utilized to develop further SDR Forum inputs into ITU-R WP 8F and WP 8A to provide the Forum's views on how to further refine the developing Recommendation. It is desirable that the Forum obtains Associate membership status in ITU-R Study Group 8 to facilitate the Forum (and its individual members) in participating and influencing the work.

In summary, the key aspects of this contribution are to:
- **recommend that a separate ITU-R document on SDR be created**
- **recommend that this document be an ITU-R Recommendation instead of an ITU-R Report**
- **recommend a format for this ITU-R Recommendation using as a basis:**
    a) **existing text currently contained in the ITU-R Technology Trends report**
    b) **examples of text to be included in the "Considerings" and "Recommends" sections of the ITU-R Recommendation**

2.2 Contribution "Information from SDR Forum on Download and Regulatory Issues for Software Defined Radio"

- Purpose: To provide information on the SDR Forum work in software download and in security issues (i.e., the mid-year report to the FCC).

- Structure: The document consists of a cover letter to the ITU with the attached contribution entitled, "Information from SDR Forum on Download and Regulatory Issues for Software Defined Radio." The contribution is an "Information Document" in ITU parlance. This means that it is printed on blue paper, thereby indicating that it is for information and not action. However, the information can be used in the work of the ITU if the ITU so desires. In this case, the expectation is that this will simply make the ITU-R aware of the work of the Forum in these areas. It raises the visibility of the SDRF work.

- Content: The frontispiece to this contribution is new text, but largely explanatory background material. The two attachments are:

    a) Attachment 1: SDR Forum Series of Documents on Software Download for RF Reconfiguration

    b) Attachment 2: SDR Forum Report on Issues and Activity in the Area of Security for Software Defined Radio.

    The Forum documents refernced in these attachments have been previously approved by the SDR Forum membership. Attachment 1 provides descriptions of the download documents – this text is from the work plan or from the download documents themselves where the text that was in the workplan was modified <u>slightly</u> by the Download Working Group.

    The text in Attachment 2 is the Executive Summary from the mid-year report which has been approved.

In summary, this contribution to the ITU-R is for information and essentially only provides text that has previously been approved by the SDR Forum membership or descriptive text that is needed to provide a background explanation of the approved text.

4. Possible Future SDR Forum Work in ITU-R WP 8F

It is reasonably expected that the ITU-R WP 8F will decide on the creation of a new ITU-R Recommendation on SDR. However, the output from the Geneva meeting of WP 8F will only be the foundation. The SDR Forum needs to develop a plan to have continuous engagement with the ITU. Some elements of this are as follows:

- At the November Meeting of the SDR Forum, an ad hoc group on ITU should be established. The major function of this ad hoc would be to begin work towards a Forum contribution to the WP 8F Meeting in March 2003.

- The SDR Forum should develop as part of its work plan for 2003, a plan for developing contributions to the two meetings of ITU-R WP 8F in 2003.

- The SDR Forum should join the ITU as an Associate member focusing on Study Group 8 the parent entity of Working Parties 8F and 8A. Associate membership for an international non-profit organization like the Forum is currently 10 500 Swiss france (approx $7,000 US) per annum.

Item 4 above is provided only as discussion point. Decisions on any of the above points in Item 4 is not relevant to the approval of the two documents that are before the membership for ballot approval. Regardless of the decisions on these points, the SDR Forum will make a major impact through its input contributions to the September-October 2002 WP 8A and WP 8F meetings.