

Project	IEEE 802.16 Broadband Wireless Access Working Group < http://ieee802.org/16 >	
Title	Call for Contributions for BWA FEC Solutions	
Date Submitted	2000-05-04	
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Re:	Call for Evaluations and Improvements, IEEE 802.16-00/11, Session #7.	
Abstract	Call for Contributions for FEC solutions emphasizing data in common metrics in a unified format, to be evaluated and reported by the Ad-Hoc FEC committee.	
Purpose	Assist the IEEE 802.16 working group in evaluating proposed FEC systems.	
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Patent
Policy and
Procedures

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Early disclosure to the Working Group of patent information that might be relevant to the standard is essential to reduce the possibility for delays in the development process and increase the likelihood that the draft publication will be approved for publication. Please notify the Chair <<mailto:r.b.marks@ieee.org>> as early as possible, in written or electronic form, of any patents (granted or under application) that may cover technology that is under consideration by or has been approved by IEEE 802.16. The Chair will disclose this notification via the IEEE 802.16 web site <<http://ieee802.org/16/ipr/patents/letters>>.

CALL FOR CONTRIBUTIONS FOR BWA FEC SOLUTIONS

IEEE 802.16.1 Session #8

Deadline: 5 June 2000

The IEEE 802.16 Working Group on Broadband Wireless Access is preparing to define the 802.16.1 broadband wireless access air interface specification in accordance the “Development Plan for the 802.16.1 Air Interface http://ieee802.org/16/docs/99/80216-99_05.pdf”). As that document details, the specification has been based on contributed proposals, with increasing detail required as the process progresses. One particular detail that remains to be resolved is the Forward Error Correction solution. An Ad-Hoc committee has been formed to investigate Forward Error Correction coding schemes relevant to IEEE 802.16.1 Broadband Wireless Access systems.

This Call invites contributions of Forward Error Correction schemes relevant to IEEE 802.16.1 for evaluation by the committee. Contributions will be analyzed collectively in a formal report submitted by the committee for Session #8. There is no intention that individual contributions will be presented separately.

Contributions will be considered non-confidential and will be posted, as soon as possible following receipt, for public access on the 802.16 Web Site <<http://ieee802.org/16>>.

Following publication on the 802.16 Web Site, any interested parties may submit comments that may aid the committee in evaluation of the contributions. Upon evaluation of the contributions and comments, the committee will jointly prepare the formal report with analysis of the contributions as well as comments and recommendations. Comments on contributions should be submitted to the committee Chairs at eric.a.jacobsen@intel.com and john@sicom.com. It is expected that an e-mailing list or egroup forum will be established so that submitted comments can be shared with interested parties. The mailing list or egroup forum membership will be open to any interested parties, and details will be published on the IEEE802.16 email reflector as soon as the appropriate mechanism is established.

Contributions should contain the following details in the tabular format shown below. All data should be indicated per aggregate code rate, and whether the code is intended for the Uplink, Downlink, or both should be indicated. Data sources should be indicated as analysis, simulation, or measurement, and should be substantiated as fully as possible. For iterative codes, the number of iterations should be indicated. QPSK will be used as the modulation for baseline comparison, and no ARQ is assumed. For the complexity estimates, submit figures for QPSK and 64QAM at 40Mbaud for Downlink codes, 30Mbaud for Uplink codes, and 40Mbaud for codes intended for both Uplink and Downlink. The assumed processing clock rate should be indicated. Document IEEE802.16.1pc/pp-00/25 may be used as an additional guideline in submitting data.

Code	Code 1	...	Code N
Aggregate Code Rate			
Uplink/Downlink/Both			

Eb/No Required at Pe = 10E-6			
Eb/No Required at Pe = 10E-9 (if available)			
Encoder Complexity (QPSK)			
Encoder Complexity (64QAM)			
Decoder Complexity (QPSK)			
Decoder Complexity (64QAM)			
Block Size, in payload data bits.			
Latency (end to end), in payload data bits.			

Table 1. Table of data required to be filled in for contributions.

Contributions should be suitable for use with the PHY and MAC proposals currently before the working group. Contributors should bear in mind that certain configurations and system features (e.g., TDMA, Adaptive Modulation) may place importance on small block sizes.

Contributions will be considered only if submitted using Revision 8 or higher of the 802.16 Document Submission Template <http://ieee802.org/16/docs/802_16_template.doc>. The template requires a cover page and a narrative. In the cover sheet category labeled “Re”, please cite not only this document (Document IEEE 802.16-00/??) but also the document number of the document(s) you are addressing.

Email your contribution, for receipt by the **deadline of 5 June 2000**, to each of the following:

- 802.16 Chair Roger Marks <<mailto:marks@nist.gov>>
- 802.16.1 Chair Lou Olsen <<mailto:louis.olsen@teligent.com>>
- 802.16.1 PHY Chair Jay Klein <<mailto:jay@ensemblecom.com>>
- The Ad-Hoc committee Chairs:
 - Eric Jacobsen <<mailto:eric.a.jacobsen@intel.com>>
 - John Liebetreu <<mailto:john@sicom.com>>

Late submissions are subject to time constraints that may preclude full evaluation by the committee. Submissions with incomplete data may not support fair comparison with competing alternatives.