Project	IEEE 802.16 Broadband Wireless Access Working Group <a href="http://ieee802.org/16">http://ieee802.org/16</a> >										
Title	Report of IEEE 802.16.3 Session #11 PHY Evaluation										
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Re:	At 802.16 Working Group Session #11, Task Group 3 of the Working Group undertook an evaluation process for submitted Physical Layer proposals. This evaluation process was concluded on January 25, 2001 when all votes were compiled and processed by Anader Benyamin-Seeyar, Chair of the 802.16.3 Evaluation Ad-Hoc, using an Excel program created by David Trinkwon. The results were further reviewed and confirmed by the TG3 Chair.										
Abstract	This document provides summary results of the voting process. The scoring results reported show those proposals that met and failed the evaluation criteria. It also shows some summary statistics for each proposal and their scores in each evaluation criteria.										
Purpose	The purpose of this document is to inform all members and observers of 802.16 of the results of the evaluation process. Proposers may use this information to assist them in the next cycle of proposal preparation to improve upon their proposals, pursue mergers of proposals, etc.,										
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Patent Policy and Procedures	The contributor is familiar with the IEEE 802.16 Patent Policy and Procedures (Version 1.0) <a href="http://ieee802.org/16/ipr/patents/policy.html">http://ieee802.org/16/ipr/patents/policy.html</a> , including the statement "IEEE standards may include the known use of patent(s), including patent applications, if there is technical justification in the opinion of the standards-developing committee and provided the IEEE receives assurance from the patent holder that it will license applicants under reasonable terms and conditions for the purpose of implementing the standard."										
	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 <a href="http://ieee802.org/16/ipr/patents/letters">http://ieee802.org/16/ipr/patents/letters</a>&gt;.</mailto:r.b.marks@ieee.org>										

## Report of Session # 11 802.16.3 PHY Voting Results

Brian Kiernan, Chair 802.16.3

At 802.16 Working Group Session #11, Task Group 3 of the Working Group undertook an evaluation process for Physical Layer proposals as described in 802.16.3-00/24, "INVITATION TO CONTRIBUTE PHY PROPOSALS: Session #11" and 802.16.3-00/20r2, "Voting Instructions for TG3 PHY Proposals at Session #11." This evaluation process was concluded on 25 January 2001 when all votes received were compiled and processed by Anader Benyamin-Seeyar, Chair of the 802.16.3 Evaluation Ad-Hoc, using an Excel program created by David Trinkwon. The results were then reviewed and confirmed by the TG3 Chair.

This document provides the summary results of the voting process. The scoring results reported here show those proposals that met and failed the evaluation criteria. It also shows some summary statistics for each proposal and their scores in each evaluation criteria. This information is provided to assist proposers in formulating their proposals for the next cycle.

All proposals receiving a minimum score of "7" in any evaluation category will be invited to submit a more detailed proposal at the next 802.16 session. This will be addressed in a separate Call for Contributions.

It is intended that this is the only information that will be made public. Individual voter records will be provided shortly on the 802.16 member's only web site.

For help in interpreting the individual proposal and criteria numbers, please use the following link: http://www.ieee802.org/16/tg3/index.html

PHY Evaluation Summary Results - Session #11

Company	Presenter	Sequence	Document	Total "Member" Votes	Total "Non- Member" Votes	Highest Average Member Score	Highest Average Non- Member Score	Highest Average "All" Score	CONCLUSION
Breezcom	Goldhammer M.	1	-01	42	7	7.00	3.71	6.34	INVITED
Oren									
Semiconductor	Manor Y.	2	-02	42	7	6.80	3.57	6.28	Not Invited
Intersil	McCallister R.	3	-04	42	7	6.89	3.57	6.27	Not Invited
	Benyamin-								
Harris Corporation	Seeyar	4	-08	42	7	7.69	9.71	<b>7.97</b>	INVITED
Com21	Langley J.	5	-09	42	7	7.33	9.71	7.68	INVITED
Advanced Hardware	e Williams D.	6	-05	42	7	<b>7.47</b>	9.75	7.66	INVITED
Hughes	Sun F.	7	-06	42	7	6.93	6.67	6.79	Not Invited
RunCom	Segal Y.	8	-11	42	7	7.65	3.00	6.91	INVITED
SciCom	Ward R.	9	-07	42	7	6.57	3.43	6.05	Not Invited
OFDM Forum	Van Waes N.	10	-10	42	7	6.81	3.00	6.09	Not Invited
Rainmaker	Miller	11	-12	42	7	4.59	2.71	4.17	Not Invited
Intel	Jacobsen E.	12	-13	42	7	6.88	3.29	6.10	Not Invited
BeamReach	Schwartz	13	-28	42	7	7.43	4.71	6.92	INVITED

## **Evaluation Category**

					1	2	3	4	5	6	7	8	9	10	11	12	13		
Company	Presenter	Sequence	Document	Maximum	System Requirements	Channel Efficiency	Realization Simplicity	Spectrum Flexibility	System Spect Effcy	Service Flexibility	Protocol Complexity	Reference Gain	Robustness	Channel Impairments	Radio Impairments	Advanced Antenna	Regulatory	Average	Minimum
MEMBER SCORES - AVERAGE																			
Breezcom	Goldhammer M.	1	-01	7.00	7.00	6.16	6.41	6.62	6.24	6.84	6.69	6.27	6.42	6.77	6.03	6.48	6.55	6.50	6.03
Oren Semiconductor	Manor Y.	2	-02	6.80	6.66	6.32	5.90	6.54	6.12	6.80	6.26	6.11	6.51	6.75	5.90	6.29	6.26	6.34	5.90
Intersil	McCallister R.	3	-04	6.89	6.67	6.41	6.65	6.57	6.46	6.89	6.66	6.24	6.33	6.69	5.89	6.56	6.35	6.49	5.89
Harris Corporation	Benyamin-Seeyar	4	-08	7.69	7.42	7.33	7.30	7.52	7.33	7.69	7.61	7.28	7.35	7.13	7.66	7.34	7.30	7.40	7.13
Com21	Langley J.	5	-09	7.33	7.06	7.16	7.00	7.26	6.97	7.19	7.33	6.96	7.00	6.81	7.29	7.15	6.88	7.08	6.81
Advanced Hardware	Williams D.	6	-05	7.47	6.65	7.35	6.80	7.00	6.78	6.83	6.60	7.22	7.35	7.47	7.04	6.52	6.42	6.93	6.42
Hughes	Sun F.	7	-06	6.93	5.50	5.85	4.64	5.65	5.56	5.48	5.62	5.64	5.93	6.47	5.36	6.93	5.29	5.69	4.64
RunCom	Segal Y.	8	-11	7.65	7.43	7.30	6.49	7.51	7.08	7.65	6.70	7.03	7.17	7.44	6.39	7.16	7.10	7.11	6.39
SciCom	Ward R.	9	-07	6.57	6.37	6.16	6.38	6.46	6.16	6.57	6.55	6.30	6.42	6.50	5.75	6.00	6.29	6.30	5.75
OFDM Forum	Van Waes N.	10	-10	6.81	6.75	6.61	6.50	6.67	6.50	6.75	6.81	6.47	6.41	6.60	6.06	6.58	6.74	6.57	6.06
Rainmaker	Miller	11	-12	4.59	3.57	4.44	3.66	4.13	4.23	4.48	4.24	4.08	4.18	4.53	3.63	3.60	4.59	4.10	3.57
Intel	Jacobsen E.	12	-13	6.88	6.53	6.34	6.41	6.63	6.46	6.62	6.47	6.00	6.39	6.88	5.85	6.17	6.52	6.41	5.85
BeamReach	Schwartz	13	-28	7.43	5.63	6.26	4.69	5.96	6.04	5.64	4.96	5.96	5.73	6.00	5.68	7.43	5.26	5.79	4.69

## **Evaluation Category**

MEMBER SCOR	RES - MINIMUM		Doc#	1	2	3	4	5	6	7	8	9	10	11	12	13
Breezcom	Goldhammer M.	1	-01	1.00	1.00	2.00	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00
Oren Semiconductor	Manor Y.	2	-02	1.00	2.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Intersil	McCallister R.	3	-04	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Harris Corporation	Benyamin-Seeyar	4	-08	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00
Com21	Langley J.	5	-09	1.00	1.00	2.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Advanced Hardware	Williams D.	6	-05	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hughes	Sun F.	7	-06	1.00	2.00	1.00	2.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
RunCom	Segal Y.	8	-11	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	2.00	2.00	1.00	2.00	1.00
SciCom	Ward R.	9	-07	1.00	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00
OFDM Forum	Van Waes N.	10	-10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Rainmaker	Miller	11	-12	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Intel	Jacobsen E.	12	-13	1.00	2.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00
BeamReach	Schwartz	13	-28	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00

## MEMBER SCORES - MAXIMUM

Breezcom	Goldhammer M.	1	-01	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Oren Semiconductor	Manor Y.	2	-02	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Intersil	McCallister R.	3	-04	10.00	10.00	10.00	10.00	10.00	9.00	9.00	9.00	9.00	10.00	10.00	10.00	10.00
Harris Corporation	Benyamin-Seeyar	4	-08	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Com21	Langley J.	5	-09	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Advanced Hardware	Williams D.	6	-05	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Hughes	Sun F.	7	-06	8.00	8.00	8.00	8.00	9.00	8.00	9.00	8.00	10.00	10.00	10.00	10.00	8.00
RunCom	Segal Y.	8	-11	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
SciCom	Ward R.	9	-07	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
OFDM Forum	Van Waes N.	10	-10	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Rainmaker	Miller	11	-12	9.00	9.00	8.00	9.00	9.00	9.00	9.00	9.00	8.00	8.00	7.00	8.00	9.00
Intel	Jacobsen E.	12	-13	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
BeamReach	Schwartz	13	-28	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00