Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**
Title	**Report of IEEE 802.16.3 Session #10 PHY Evaluation**
Date Submitted	**2001-01-05**

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Re:	At 802.16 Working Group Session #10, Task Group 3 of the Working Group undertook an evaluation process for initial Physical Layer proposals. This evaluation process was concluded on Nov 20, 2000 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 Twinkwon.
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. This revised report corrects the voting results for an administrative error that resulted in two observer votes being included in the numerical results. **The revision does NOT affect the ultimate evaluation results and invitation selection.**
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.,
Notice	This document has been prepared to assist IEEE 802.16. It is offered as a basis for discussion and is not binding on the contributing individual(s) or organization(s). The material in this document is subject to change in form and content after further study. The contributor(s) reserve(s) the right to add, amend or withdraw material contained herein.
Release	The contributor grants a free, irrevocable license to the IEEE to incorporate text contained in this contribution, and any modifications thereof, in the creation of an IEEE Standards publication; to copyright in the IEEE s name any IEEE Standards publication even though it may include portions of this contribution; and at the IEEE s sole discretion to permit others to reproduce in whole or in part the resulting IEEE Standards publication. The contributor also acknowledges and accepts that this contribution may be made public by IEEE 802.16.
Patent Policy and Procedures	The contributor is familiar with the IEEE 802.16 Patent Policy and Procedures (Version 1.0) <http://ieee802.org/16/ipr/patents/policy.html>, 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 <http://ieee802.org/16/ipr/patents/notices>.

Report of Session # 10 802.16.3 PHY Voting Results

Brian Kiernan, Chair 802.16.3

At 802.16 Working Group Session #10, Task Group 3 of the Working Group undertook an evaluation process for initial Physical Layer proposals as described in 802.16.3-00/14, Call for Contributions for Session #10 and 802.16.3-00/20r1, Voting instructions for TG3 Initial PHY proposals. This evaluation process was concluded on 20 November 2000 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 Twinkwon.

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 6 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.

This revised report corrects the voting results for an administrative error that resulted in two observer votes being included in the numerical results. **The correction does NOT affect the ultimate evaluation results and invitations to Session #11.**

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.

IEEE 802.16.3 Session #10 PHY Voting Summary

Presenter	Sequence	Document	Total "Member" Votes	Total "Non-Member" Votes	Highest Average Member Score	Highest Average Non-Member Score	Highest Average "All" Score	CONCLUSION
Williams	1	**45**	**49**	**8**	**6.88**	**9.25**	**7.18**	**INVITED**
Sydor	2	**46**	**49**	**8**	5.50	**9.00**	**6.05**	**NOT INVITED**
Wang	3	**42**	**49**	**8**	5.47	**6.25**	**5.61**	**NOT INVITED**
Heise	4	**29**	**49**	**8**	**7.29**	**7.71**	**7.31**	**INVITED**
Chayat	5	**30**	**49**	**8**	**7.29**	**7.29**	**7.22**	**INVITED**
Seller	6	**31**	**49**	**8**	**6.94**	**7.43**	**6.93**	**INVITED**
Hall	7	**32**	**49**	**8**	5.89	**6.75**	**6.04**	**NOT INVITED**
Segal	8	**33**	**49**	**8**	**7.61**	**9.00**	**7.76**	**INVITED**
Manor	9	**37**	**49**	**8**	**7.18**	**8.71**	**7.31**	**INVITED**
Ye	10	**35**	**49**	**8**	**7.19**	**8.00**	**7.34**	**INVITED**
McCallister	11	**36**	**49**	**8**	**7.21**	**7.17**	**7.11**	**INVITED**
Hadad	12	**34**	**49**	**8**	**7.58**	**9.00**	**7.73**	**INVITED**
Ward	13	**38**	**49**	**8**	**7.00**	**7.71**	**7.08**	**INVITED**
Edison	14	**39**	**49**	**8**	**6.05**	**7.25**	**6.27**	**INVITED**
Benyamin-Seeyar	15	**40**	**49**	**8**	**6.79**	**6.63**	**6.73**	**INVITED**
van Waes	16	**41**	**49**	**8**	**7.35**	**7.71**	**7.26**	**INVITED**
Sellars	17	**28**	**49**	**8**	5.68	**6.88**	**5.89**	**NOT INVITED**
Hammons	18	**43**	**49**	**8**	**7.32**	**7.86**	**7.39**	**INVITED**
Quilez	19	**44**	**49**	**8**	**7.00**	**7.00**	**6.92**	**INVITED**
Ran	20	**48**	**49**	**8**	5.75	**7.00**	**5.96**	**NOT INVITED**

Evaluation Category

Presenter	Sequence	Document	Maximum	*1* System Requirements	*2* Channel Efficiency	*3* Realization Simplicity	*4* Spectrum Flexibility	*5* System Spect Effcy	*6* Service Flexibility	*7* Protocol Complexity	*8* Reference Gain	*9* Robustness	*10* Channel Impairments	*11* Radio Impairments	*12* Advanced Antenna	*13* Regulatory	Average	Minimum
MEMBER SCORES - AVERAGES																		
Williams	1	**45**	**6.88**	**5.04**	**6.39**	**5.15**	**5.96**	**6.04**	**4.77**	**3.83**	**5.74**	**6.80**	**6.88**	**5.20**	**3.91**	**4.28**	**5.38**	**3.83**
Sydor	2	**46**	5.50	**4.11**	**5.06**	**4.10**	**4.85**	**5.50**	**3.78**	**3.35**	**4.22**	**5.09**	**4.87**	**4.43**	**4.94**	**4.14**	**4.50**	**3.35**
Wang	3	**42**	5.47	**4.53**	**4.71**	**4.15**	**4.74**	**4.78**	**4.23**	**3.83**	**4.00**	**5.47**	**5.30**	**4.58**	**3.62**	**4.29**	**4.48**	**3.62**
Heise	4	**29**	**7.29**	**6.54**	**6.51**	**6.13**	**6.89**	**6.78**	**6.48**	**6.13**	**6.56**	**7.11**	**7.29**	**6.70**	**5.25**	**6.81**	**6.55**	**5.25**
Chayat	5	**30**	**7.29**	**6.86**	**6.76**	**6.44**	**7.22**	**6.79**	**6.77**	**6.06**	**6.84**	**7.24**	**7.29**	**6.46**	**6.19**	**7.11**	**6.77**	**6.06**
Seller	6	**31**	**6.94**	**5.97**	**6.67**	**5.87**	**6.79**	**6.47**	**6.07**	**5.23**	**5.89**	**6.77**	**6.94**	**6.06**	**5.90**	**5.96**	**6.20**	**5.23**
Hall	7	**32**	5.89	**4.72**	**5.18**	**4.43**	**5.47**	**5.53**	**4.65**	**3.75**	**4.72**	**5.89**	**5.59**	**5.18**	**5.03**	**4.61**	**4.98**	**3.75**
Segal	8	**33**	**7.61**	**7.05**	**6.93**	**6.08**	**7.26**	**6.83**	**6.44**	**5.82**	**6.61**	**7.34**	**7.61**	**6.46**	**5.50**	**6.76**	**6.67**	**5.50**
Manor	9	**37**	**7.18**	**6.77**	**6.84**	**6.70**	**7.15**	**6.65**	**6.48**	**6.24**	**6.19**	**6.98**	**7.18**	**6.50**	**6.33**	**6.90**	**6.68**	**6.19**
Ye	10	**35**	**7.19**	**5.83**	**6.39**	**5.19**	**6.69**	**6.36**	**5.61**	**4.83**	**6.71**	**6.77**	**6.88**	**6.24**	**7.19**	**5.96**	**6.20**	**4.83**
McCallister	11	**36**	**7.21**	**6.69**	**6.56**	**6.64**	**6.95**	**6.35**	**6.03**	**5.67**	**6.07**	**7.21**	**7.18**	**6.60**	**5.94**	**6.36**	**6.48**	**5.67**
Hadad	12	**34**	**7.58**	**6.88**	**6.91**	**5.97**	**7.13**	**6.85**	**6.57**	**6.03**	**6.52**	**7.36**	**7.58**	**6.26**	**5.37**	**6.69**	**6.62**	**5.37**
Ward	13	**38**	**7.00**	**6.77**	**6.83**	**6.31**	**6.83**	**6.64**	**6.22**	**5.71**	**6.03**	**6.74**	**7.00**	**6.24**	**5.54**	**6.18**	**6.39**	**5.54**
Edison	14	**39**	**6.05**	**5.32**	**5.76**	**5.69**	**5.81**	**5.58**	**5.34**	**5.26**	**5.40**	**5.38**	**5.29**	**6.05**	**5.29**	**5.31**	**5.50**	**5.26**
Benyamin-Seeyar	15	**40**	**6.79**	**6.68**	**6.67**	**6.08**	**6.78**	**6.43**	**6.50**	**6.22**	**6.03**	**6.79**	**6.75**	**6.39**	**6.56**	**6.36**	**6.48**	**6.03**
van Waes	16	**41**	**7.35**	**6.79**	**6.95**	**6.67**	**7.35**	**6.92**	**6.69**	**6.00**	**6.32**	**7.22**	**7.21**	**6.72**	**5.94**	**6.63**	**6.72**	**5.94**
Sellars	17	**28**	5.68	**4.52**	**5.09**	**5.10**	**5.38**	**4.83**	**5.08**	**4.71**	**4.80**	**4.88**	**4.20**	**5.68**	**4.34**	**5.07**	**4.90**	**4.20**
Hammons	18	**43**	**7.32**	**5.94**	**6.34**	**5.14**	**6.13**	**6.24**	**5.94**	**4.69**	**5.74**	**6.92**	**7.32**	**6.53**	**7.17**	**5.79**	**6.15**	**4.69**
Quilez	19	**44**	**7.00**	**6.70**	**6.68**	**6.59**	**6.90**	**6.20**	**6.41**	**6.14**	**6.20**	**6.78**	**7.00**	**6.60**	**5.37**	**6.75**	**6.49**	**5.37**
Ran	20	**48**	5.75	**5.26**	**5.60**	**5.25**	**5.59**	**5.07**	**4.95**	**4.69**	**4.93**	**5.24**	**4.72**	**5.75**	**4.64**	**5.14**	**5.14**	**4.64**

MEMBER SCORES - MINIMUMS

Williams	1	**45**	**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**	**1.00**	**1.00**	**1.00**
Sydor	2	**46**	**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**	**1.00**	**1.00**	**1.00**
Wang	3	**42**	**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**	**1.00**	**1.00**	**1.00**
Heise	4	**29**	**1.00**	**1.00**	**1.00**	**2.00**	**1.00**	**1.00**	**1.00**	**1.00**	**2.00**	**2.00**	**3.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**
Chayat	5	**30**	**2.00**	**1.00**	**2.00**	**3.00**	**1.00**	**1.00**	**1.00**	**1.00**	**2.00**	**2.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**
Seller	6	**31**	**1.00**	**1.00**	**1.00**	**3.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**2.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**
Hall	7	**32**	**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**	**1.00**	**1.00**	**1.00**
Segal	8	**33**	**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**	**1.00**	**1.00**	**1.00**
Manor	9	**37**	**2.00**	**1.00**	**1.00**	**4.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**
Ye	10	**35**	**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**	**1.00**	**1.00**	**1.00**
McCallister	11	**36**	**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**	**1.00**	**1.00**	**1.00**
Hadad	12	**34**	**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**	**1.00**	**1.00**	**1.00**
Ward	13	**38**	**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**	**1.00**	**1.00**	**1.00**
Edison	14	**39**	**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**	**1.00**	**1.00**	**1.00**
Benyamin-Seeyar	15	**40**	**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**	**1.00**	**1.00**	**1.00**
van Waes	16	**41**	**2.00**	**1.00**	**2.00**	**2.00**	**1.00**	**1.00**	**1.00**	**1.00**	**2.00**	**2.00**	**2.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**
Sellars	17	**28**	**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**	**1.00**	**1.00**	**1.00**
Hammons	18	**43**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**2.00**	**2.00**	**2.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**
Quilez	19	**44**	**2.00**	**1.00**	**2.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**2.00**	**2.00**	**2.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**
Ran	20	**48**	**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**	**1.00**	**1.00**	**1.00**

MEMBER SCORES - MAXIMUMS

Williams	1	**45**	**8.00**	**10.00**	**10.00**	**10.00**	**10.00**	**10.00**	**9.00**	**10.00**	**10.00**	**10.00**	**10.00**	**10.00**	**8.00**	**10.00**	**10.00**	**10.00**
Sydor	2	**46**	**10.00**	**10.00**	**10.00**	**10.00**	**10.00**	**8.00**	**8.00**	**8.00**	**10.00**	**10.00**	**10.00**	**10.00**	**10.00**	**10.00**	**10.00**	**10.00**
Wang	3	**42**	**8.00**	**8.00**	**7.00**	**8.00**	**9.00**	**8.00**	**7.00**	**8.00**	**10.00**	**9.00**	**7.00**	**7.00**	**7.00**	**10.00**	**10.00**	**10.00**
Heise	4	**29**	**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**	**10.00**	**10.00**	**10.00**
Chayat	5	**30**	**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**	**10.00**	**10.00**	**10.00**
Seller	6	**31**	**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**	**10.00**	**10.00**	**10.00**
Hall	7	**32**	**8.00**	**9.00**	**8.00**	**9.00**	**10.00**	**9.00**	**7.00**	**8.00**	**10.00**	**9.00**	**8.00**	**10.00**	**7.00**	**10.00**	**10.00**	**10.00**
Segal	8	**33**	**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**	**10.00**	**10.00**	**10.00**
Manor	9	**37**	**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**	**10.00**	**10.00**	**10.00**
Ye	10	**35**	**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**	**10.00**	**10.00**	**10.00**
McCallister	11	**36**	**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**	**10.00**	**10.00**	**10.00**
Hadad	12	**34**	**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**	**10.00**	**10.00**	**10.00**
Ward	13	**38**	**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**	**10.00**	**10.00**	**10.00**
Edison	14	**39**	**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**	**10.00**	**10.00**	**10.00**
Benyamin-Seeyar	15	**40**	**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**	**10.00**	**10.00**	**10.00**
van Waes	16	**41**	**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**	**10.00**	**10.00**	**10.00**
Sellars	17	**28**	**10.00**	**10.00**	**10.00**	**10.00**	**10.00**	**10.00**	**10.00**	**10.00**	**9.00**	**9.00**	**10.00**	**9.00**	**10.00**	**10.00**	**10.00**	**10.00**
Hammons	18	**43**	**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**	**10.00**	**10.00**	**10.00**
Quilez	19	**44**	**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**	**10.00**	**10.00**	**10.00**
Ran	20	**48**	**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**	**10.00**	**10.00**	**10.00**