Document under Review: P802.16-REVd/D2 **Ballot Number:** 13a

Comment #	Comment submitted by:			Comment Date
027	Marc	Engels	Member	2003-10-30

Comment Type	Starting Page #	Starting Line #	Fig/Table#	Section
Technical, Binding				

include congestion control mechanism, as proposed in contribution IEEE C802.16d-03/54

Suggested Remedy

Proposed Resolution **Recommendation:** **Recommendation by**

Reason for Recommendation

Resolution of Group **Decision of Group:** Rejected

Reason for Group's Decision/Resolution

No specific text provided

Group's Notes

Group's Action Items

Editor's Notes **Editor's Actions** I) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: P802.16-REVd/D2 **Ballot Number:** 13a **Comment Date**

Comment # 613 **Comment submitted by:** Marc Engels Member 2003-12-30

Comment Type Technical, Binding **Starting Page #** 999 **Starting Line #** **Fig/Table#** **Section**

With respect to my comments, all but one are satisfied. So, for this re-circulation I dissaprove with only one technical binding comment, nr. 27 (include congestion control mechanism). Based on the feedback we got, I attach an updated contribution for congestion control (C802.16d-03/83).

Suggested Remedy

Proposed Resolution **Recommendation:** **Recommendation by**

Reason for Recommendation

Resolution of Group **Decision of Group:** Rejected

Reason for Group's Decision/Resolution

Vote to accept changes prescribed in C802.16d-03/83r1:
Approve: 2 DIsapprove: 15

The standard currently supplies sufficient mechanisms to support similiar capabilities.

Group's Notes

Group's Action Items

Editor's Notes **Editor's Actions** I) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: P802.16-REVd/D2 **Ballot Number:** 13a **Comment Date**

Comment # 621 **Comment submitted by:** Nico van Waes Member 2003-12-29

Comment Type Technical, Binding **Starting Page #** 999 **Starting Line #** **Fig/Table#** **Section** 8.2

This comment is a follow-up to comment 429.

In the group response to comment 429, it is finally acknowledged that the system throughput (i.e. the system capacity) of the spread BPSK feature is extremely poor, which is at least some progress.

However, the feature in question (which is mandatory when complying with any of the profiles) is now justified by unspecified applications (rather than the coverage holes excuse, which was made in previous responses), which a "normal system" "would NEVER use". Given that a "normal system" provides Fixed Broadband Wireless Access services, these by comparison abnormal applications therefor can not be Fixed Broadband Wireless Access applications.
As such, this feature is in violation of the scope of this project, as shown in the 802.16-REVd PAR. Therefor, it must be deleted.

Though it is not mentioned in the group response, during the meeting, proponents of this feature noted that this feature would be applicable for "homeland security". With regards this, I must note the following:
1) Security/emergency applications are not broadband access applications, and therefor are as noted above outside the scope of the 802.16-REVd PAR.
2) There are other standardization efforts for security and emergency applications. Trying to sneak this one in through the backdoor isn't helpful for anybody.
3) The specification is not suitable for security/emergency applications, even with the spread BPSK feature attached to it. One of the most basic reasons is that the specification is for frequencies of 2 GHz and above, which has propagation properties unsuitable for these services. The second, somewhat related, reason is that the obtainable link-budget, even with the most aggressive spreading, is tens of dBs lower than for systems specifically designed for these purposes.
5) If the system is used as an emergency system after it has been deployed as fixed broadband wireless access system, logic has it that the coverage area for the emergency service will be the same as that of the fixed broadband service. Extending the range of one BS in a normal multicell deployment therefor is utterly useless.

Suggested Remedy

Modify spread BPSK feature to comply with 802.16-REVd PAR.
Delete spread BPSK feature or modify it to allow decent system throughput for Fixed Broadband Wireless Access services (by reducing the spreading gain and mandating parallel reception).

Proposed Resolution **Recommendation:** **Recommendation by**

Reason for Recommendation

Resolution of Group **Decision of Group:** **Accepted-Modified**

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Page 357, Line 58, Change as shown

Only spreading factors from the set $F_S = 2^n$, $0 <= n <= n_{max}$ where n_{max} = ~~6~~ 3 (for downlink), 4 (for upliink) shall be used. Support of all spreading factors is mandatory. The spreading factor used by a burst is specified within its burst profile encoding for modulation type.

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Page 378, Line 11, Change (Fs =1,2, or 4) to Change (Fs =1, 2, or 8)

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Page 590, Line 54, Change upper limit for Fs from 6 to 4

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Page 595, Line 9, Change upper limit for Fs from 6 to 3

Reason for Group's Decision/Resolution

Within the concept of a BWA system, the appropriate consideration of "special applications" is the ability of the BWA system to maintain link integrity and some level of service for its customers during adverse conditions (e. g. extreme weather, antenna damage, obstructing debris, etc.). In this regard, the BPSK feature is certainly within the scope of the PAR. The proposed resolution reduces the allowed spreading factors to Nmax = 4 as suggested. The issue of mandating parallel reception at the BS has been explored previously and there has been agreement that no interoperability issues exist when making implementation of this feature optional. As a result, since the decision of whether or not to use parallel reception is up to the BS, it would seem that the decision of whether or not to implement parallel reception should be left to the BS vendor.

Group's Notes

Group's Action Items

Editor's Notes **Editor's Actions** k) done

Editor's Questions and Concerns

Editor's Action Items