Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**
Title	**P-P and PMP coexistence calculations based on ETSI TR 101 853 v1.1.1**
Date Submitted	**2002-05-10**
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Re:	Completing action items identified in IEEE C802.16.2a-02/06 (Interim Considerations arising from Simulations)
Abstract	An Excel worksheet implementing the coexistence calculations for the P-P and PMP scenarios described in the ETSI published report TR 101 853 “Rules for the co-existence of point to point and point to multipoint systems using different access methods in the same frequency band”. Classes B1 to B4 are included only.
Purpose	For discussion in the TG2a task group meeting at Session 19.
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P-P and PMP coexistence calculations based on ETSI TR 101 853 v1.1.1

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Introduction

In order to assist the Task Group in drawing conclusions and recommendations regarding the coexistence possibilities for P-P and PMP systems, a spreadsheet (document C802.16.2a-02/25) has been developed from the work published by ETSI in Report TR 101 853. This report examines interference scenarios labeled classes B1 to B4 that reflect all the possible interference paths between a P-P link and a PMP system.

ETSI TR 101-853 is available for free download from the ETSI Web Site and is already summarized in the Recommended Practice IEEE Std 802.16.2-2001 Annex D.

TR 101-853 Interference Classes

In summary these are:
Class B1 = PMP Central Station (CRS) to P-P station. (See TR 101 853 clause 7.2.2)
Class B2 = P-P station to PMP Central Station (CRS). (See TR 101 853 clause 7.2.3)
Class B3 = PMP Terminal Station (TS) to P-P station. (See TR 101 853 clause 7.2.4)
Class B4 = P-P station to PMP Terminal Station (TS). (See TR 101 853 clause 7.2.5)

Classes B1 and B2 are tackled by calculating the required minimum separation distance between the P-P station and the CRS for a given range of P-P link offset angles. A minimum C/I is assumed.

Classes B3 and B4 are tackled differently since there are more variables due to TS positioning. In these cases the actual C/I is calculated for a range of TS to P-P decoupling angles and P-P link offset angles.

The scenarios are illustrated in detail in the report.

Notes regarding the Spreadsheet

Parameter values have been taken from published standards where available. All parameters can be varied and frequency offset can be applied through Net Filter Discrimination (NFD). Embedded notes help clarify the origins of data and the calculation process.

The Spreadsheet

The spreadsheet file is submitted as document C802.16.2a-02/25 (file name: C802162a-02_25.xls)