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| Title | **IEEE 802.16j Technical Requirements** |
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| Re: | This contribution is in the response of call for contribution issued for 802.16j project on July 3rd, 2006. |
| Abstract | This document proposes a set of technical requirements for the consideration of 802.16j TG. |
| Purpose | The purpose of the document is to set requirements for the Mobile Multi-Hop Relay Specification. |
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# IEEE 802.16j Technical Requirements

## Introduction

This contribution provides a set of technical requirements in response to the call for contribution issued on July 3rd, 2006 (http://ieee802.org/16/relay/docs/80216j-06_006.pdf). This is a revised version of IEEE C802.16j-06/016, produced after merging requirements with the other joint requirement contribution [1]. The requirements which we were not able to merge, but we think that they are important for the TG consideration are listed in this version. The technical requirements outlined in this contribution are non-exhaustive and is expected to be modified and merged with the other contributions under the same topic.

## *Architectural Requirements*

1. Specification of RS shall follow PMP mode of operation.

## *Functional Requirements*

1. Specification shall enable RS to be power efficient, especially in mobile and client RS modes, where it may not be connected to a continuous power outlet.

2. RS shall support mobile and stationary station's HARQ operation. The specification shall ensure that the data reliability via multi-hop to be the same as the one provided by HARQ via one hop.

## *Mobility Requirements*

1. The 802.16 specification shall support handover of the RS along with the associated SS/MS. For example, an RS attached to a train or bus moves along with the MS/SS in the bus.

2. The specification shall support location update of the RS along with the associated SS/MS.

## *Security Requirements*

1. RS shall not add any new security threats in the existing system as defined in 802.16e-2005.

## Reference

[1] IEEE C802.16j-06/050, "Proposed Mandatory Technical Requirements for IEEE 802.16 TGj" July 06