Session #47 802.16 relay TG Session Agenda

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None

Purpose:

TG Meeting organization

Session #47 802.16 Relay TG Opening Remarks and Session Agenda

5th Task Group Meeting on Multi-hop Relay in IEEE 802.16

Relay TG Chair Mitsuo Nohara

Vice Chair Peiying Zhu

Technical Editor/Secretary Jung Je Son

Technical Editor Mike Hart

IEEE802.16 Relay TG Meeting

15-18 Jan., 2007, London, UK

Objectives of this 5th TG Meeting

- To advance the development of the P802.16j Baseline Document (IEEE802.16j-06/026r1)
  - Through the Technical Contributions presentation and discussion,
  - Considering the five Guideline Documents of:
    - Usage Models (IEEE802.16j-06/015),
    - Definitions and Terminology (IEEE802.16j-06/014r1),
    - Evaluation Methodology (IEEE802.16j-06/013r2),
    - Technical Requirements (IEEE802.16j-06/016r1) and
    - Table of Contents (IEEE802.16j-06/017r2).
- To proceed to the “call for comments” on the baseline document towards the next meeting for the draft standard.

Agenda

1. **Session #46 802.16 Relay TG Minutes Review**

   (IEEE 802.16-06/033)

2. **Technical Contributions Presentation and Discussion,**

   *** in reply to the call for Technical Proposals (IEEE 802.16-06/034) on:**

   - **P802.16j Baseline Document (IEEE802.16j-06/026r1)**

   *** considering the five guideline documents of:**

   - **Usage Models (IEEE802.16j-06/015),**
   - **Definitions and Terminology (IEEE802.16j-06/014r1),**
   - **Evaluation Methodology (IEEE802.16j-06/013r2),**
   - **Technical Requirements (IEEE802.16j-06/016r1) and**
   - **Table of Contents (IEEE802.16j-06/017r2).**

   - **with the presentation order as attached.**
   - **some discussions to be conducted in parallel, subject to meeting room availability**

3. **Text Proposals for the Baseline Draft.**

4. **AOB**

Technical Contributions

(Call for Technical Proposals by 8 Jan., 2007)

- 170* Contributions submitted,

  * some associated with presentation materials.
  * revisions not double-counted.
  * S802.16j-07/070 has no main document thus rejected.
  - Docs. 07/052, 07/115, 07/121, 07/133, 07/155, 07/160 broke the numbering scheme thus some numbers remain unused. Please don't do this again.

- Contributions Presentation during this session:
  - Please provide the following information:
    - Key Feature
    - Difference from the previous one, if any
    - Usage Model and/or Technical Conditions applied (e.g., BS-MS link required, Centralized and/or Distributed Control, Mandatory and/or Optional, etc.,)

Topics and Categories

1. Relay concepts (4)
2. Security (5)
3. Frame structure (33)
4. Network entry (33)
5. BW request (10)
6. Construction & transmission of MAC PDUs (5)
7. Measurement & reporting (9)
8. Mobility management (41)
9. Routing & path management (11)
10. RRM, Scheduling & Interference control (4)
11. PHY (12)
12. Evaluation methodology (2)

Ref. How we did last time: 1. Relay concepts

No.	Title	Author 1	Affiliation	Category
127	A Proposal for combined A&F and D&F relaying	Junichi Suga	Fujitsu	Relay concepts
130	A proposal for introducing a shared RS system in MR	Keniichi Nakatsugawa	Fujitsu	Relay concepts
132	Relaying methods proposal for 802.16j	Masato Okuda	Fujitsu	Relay concepts
160	Support for a Simplified Uplink-Only Relaying Mode	Philippe Sartori,.	Motorola	Relay concepts
200	Cooperative Relay Protocol	D.J. Shyy	MITRE	Relay concepts
201	SMART Relay Alliance Proposal	Arnaud Tonnerre,	Thales (SMART)	Relay concepts
225	Directional Distributed Relay with Interference Control and Management	Yong Sun,	Toshiba Research Europe	Relay concepts
238	MMR Protocol Stack	Hang Zhang	Nortel, Institute for Information Industry	Relay concepts
235	Moving RS operation	Hang Zhang,	Nortel	Relay concepts

Ref. How we did last time:

1. Relay concepts: Summary & Discussion Points

- 127: A&F concept for in-frame relaying
- 130: Shared RS (one RS to two or more BS)
- 132: Transparent & Non-transparent RS with connection mgmt @ MR-BS
- 160: Transparent UL relaying
- 200: Co-operative relay group concept (264, 273)
- 201: Smart relay (low complexity & enhanced → CC)
- 225: Directional distributed RS
- 238: Description of .16j protocol stack
- 235: Proposal to relay at CS for Mobile RS

Categories

- Relay concepts (4)
- Security (5)
- Frame structure (33)
- Network entry (33)
- Bandwidth request (10)
- Construction & transmission of M-PDUs (5)
- Measurement & reporting (9)
- Mobility management (41)
- Routing & path management (11)
- RRM, scheduling & interference control (4)
- PHY (12)
- Evaluation methodology (2)

Relay concepts

No	Title	First Author	Company	Topic	Sub-topic
6160	Support for a Simplified Uplink-Only Relaying Mode	Philippe Sartori,.	Motorola	Relay concepts	Connections & addressing
7006	A proposal for introducing a shared RS system in MR	Keiichi Nakatsugawa	Fujitsu Laboratories Ltd.,Fujitsu Microelectronics Canada Inc.	Relay concepts	Shared RS
7096	MMR Protocol Stack and Definition of RS Types	Hang Zhang	Nortel, III	Relay concepts	Protocol stack
7160	Proposal of an RS Concept Utilizing True Sectoring Capabilities	Antonopoulos Ch,	INTRACOM S.A. Telecom Solutions	Relay concepts	Segmentation

Security

No	Title	First Author	Company	Topic	Sub-topic
7069	Management Message Integrity Check for Multi-hop Relay Systems	Kanchei (Ken) Loa	Institute for Information Industry (III)	Security	
7075	Authorization and Key Exchange in 802.16j system	Yanling Lu,	Hisilicon Technologies	Security	
7098	Hybrid authentication hierarchy in MMR Control Plane for the relay network	Sheng Sun	Nortel	Security	
7134	Key Hierarchy of the RRSP for the MMR Relay Network	Sheng Sun	Nortel	Security	
7149	TEK Transfer in Relay Systems	Masato Okuda	Fujitsu	Security	

Frame structure

- Non-transparent
  - Multi-hop
  - Ambles (frame start and relay)
- Transparent
- Signaling
- Construction & transmission of MAPs
- Others
  - Non-transparent frame alignment (1)
  - MAC (1)
  - A&F (1)
  - Out-of-band (1)
  - Transition gaps (1)

Frame structure – Multi-hop

No	Title	First Author	Company	Topic	Sub-topic
7012	Frame structure for support of multihop relaying	Mike Hart	Fujitsu	Frame structure	Multi-hop
7100	Frame Structure to Support Relay Node Operations	Hang Zhang	Nortel, III	Frame structure	Multi-hop
7106	A General Frame Structure for IEEE802.16j Relaying Transmission	Yong Sun	Toshiba Research Europe Limited	Frame structure	Multi-hop
7109	Frame Structure to Support Multi-hop Relay Operation	Wendy C Wong	Intel, Motorola, ITRI	Frame structure	Multi-hop
7117	An adaptive frame structure for OFDMA-based mobile multi-hop relay networks	Jeffrey Z. Tao	Mitsubishi Electric Research Lab, Mitsubishi Electric Corp	Frame structure	Multi-hop
7135	Comments on Frame Structure for multi-hop relay	Changyoon Oh	Samsung Electronics	Frame structure	Multi-hop
7145	Non-transparent relay frame structure extension for multi-hop (>2 hops) support	Xiaobing Leng	Alcatel-Lucent	Frame structure	Multi-hop

Frame structure - Ambles

No	Title	First Author	Company	Topic	Sub-topic
6240	RS DL Synchronization and Radio Environment Measurement – Introduction of RS-Preamble	Hang Zhang,	Nortel	Frame structure	Ambles
7015	Relay amble position	Mike Hart	Fujitsu	Frame structure	Ambles
7017	Relay zone amble	Mike Hart	Fujitsu	Frame structure	Ambles
7021	Re-organizing the PN sequences for RS access.	Dorin Viorel	Fujitsu Microelectronics Canada Inc.	Frame structure	Ambles
7038	RS-amble position for Multihop Relays	Adrian Boariu	Nokia	Frame structure	Ambles
7040	Fixed/Nomadic Relay-Station Preamble Segment Assignment Scheme	Peter Wang,	Nokia, ITRI, , III	Frame structure	Ambles
7041	Mobile Relay Station Preamble Segment Re-Assignment Scheme	Peter Wang,	Nokia, Motorola, ITRI, ETRI, III	Frame structure	Ambles
7081	Discussions on the RS-Preamble Location	Hang Zhang	Nortel, University of Waterloo, III	Frame structure	Ambles
7136	On the use of postamble for the relay link	Changyoon Oh	Samsung Electronics	Frame structure	Ambles
7141	Postamble sequence design for supporting relay zone synchronization	Youngbin Chang	Samsung Electronics	Frame structure	Ambles
7156	RS preamble transmission for continuous synchronization and neighborhood scanning	Gamini Senarnath	Nortel	Frame structure	Ambles

Frame structure - Transparent

No	Title	First Author	Company	Topic	Sub-topic
7023	Frame Structure for Transparent Mode	Michiharu Nakamura	Alcatel-Lucent, ITRI, Fujitsu, Toshiba	Frame structure	Transparent
7064	In-band Transparent Relay Frame Structure	Kanchei (Ken) Loa	Institute for Information Industry (III), Nortel	Frame structure	Transparent
7103	Frame Structure to Support Transparent Relay Node Operation	Kevin Baum	Motorola	Frame structure	Transparent
7127	Frame Structure for Transparent Relay	Aik Chindapol	Siemens	Frame structure	Transparent
7170	Frame Structure for Transparent Relay	Jae Hyung Eom, Kyu Ha Lee, Changkyoon Kim, Byung-Jae Kwak, Suchang Chae, Young-il Kim	Samsung Thales, ETRI	Frame structure	Transparent

Frame structure - Signaling

No	Title	First Author	Company	Topic	Sub-topic
7013	Signalling support for two-hop and multi-hop frame structure	Mike Hart	Fujitsu	Frame structure	Signalling
7018	Relay zone structure definition	Mike Hart	Fujitsu	Frame structure	Signalling
7090	Format of R-MAP within RS-Zone	Hang Zhang	Nortel, III	Frame structure	Signalling

Frame structure - MAPs

No	Title	First Author	Company	Topic	Sub-topic
6157	MAP construction and transmission for a relay station	Mohsin Mollah	Motorola	Frame structure	Construction & transmission of MAP
7130	MAP-based Data Relay in Transparent RS	Sungcheol Chang	ETRI	Frame structure	Construction & transmission of MAP

Frame structure - Others

No	Title	First Author	Company	Topic	Sub-topic
7003	Direct Relaying Zone	Junichi Suga	Fujitsu, ETRI, Samsung Thales	Frame structure	A&F
7142	On the definition of the transition gap for accommodating Relay operation	Youngbin Chang	Samsung Electronics	Frame structure	Gaps
7162	Multiple Frame and Relay Operation for 802.16 MMR Networks	D.H. Ahn, Junhong Hui, C.I.Yeh, Young-il Kim,Hyukjoon Lee,Kyu Ha Lee,Chung-wook Suh	ETRI, Kwangwoon University, Samsung Thales, Securepia	Frame structure	MAC
7102	Frame Alignment Requirement in Relays	Gamini Senarath	Nortel, Intel	Frame structure	Non-transparent
7110	Frame Structure to Support Out-of-Band Relay	Wendy C Wong	Intel	Frame structure	Out-of-band

Network entry

- MS
- RS
- Connection & addressing

Network entry - MS

No	Title	First Author	Company	Topic	Sub-topic
7001	MS network entry for transparent Relay Station	Masato Okuda	Fujitsu, ITRI, NCTU, IIR, Alcatel Shanghai Bell	Network entry	MS
7008	MS network entry for non-transparent Relay Station with centralized Scheduling	Masato Okuda	Fujitsu, ITRI, NCTU, Nokia, Alcatel Shanghai Bell	Network entry	MS
7024	MS network entry for non-transparent Relay Station with distributed Scheduling	Masato Okuda	Fujitsu, ITRI, NCTU, Nokia, Alcatel Shanghai Bell	Network entry	MS
7028	Message definition to support MS network entry in centralized allocation model	Shashikant Maheshwari,	Nokia	Network entry	MS
7055	MS Initial Ranging with Non-Transparent RS	Kanchei (Ken) Loa	Institute for Information Industry (III)	Network entry	MS
7056	MS Initial Ranging with Transparent RS	Kanchei (Ken) Loa	Institute for Information Industry (III), Nortel	Network entry	MS
7077	Initial Ranging in 802.16j system	Yanling Lu,	Hisilicon Technologies, Huawei Technologies	Network entry	MS
7125	Relay-Assisted MS Network Entry	Aik Chindapol	Siemens	Network entry	MS
7169	Ranging in MMR System	Changkyoon Kim, Kyu Ha Lee, Hyung Kee Kim	Samsung Thales, ETRI	Network entry	MS

Network entry - RS

No	Title	First Author	Company	Topic	Sub-topic
7016	Transparent RS network entry	Mike Hart	Fujitsu	Network entry	RS
7025	Non-transparent RS network entry procedure	Mike Hart	Fujitsu	Network entry	RS
7045	A grouping scheme of relay stations for 802.16j	Tzu-Ming Lin	ITRI/NCTU	Network entry	RS
7067	RS Initial ranging with MR-BS	Kanchei (Ken) Loa	Institute for Information Industry (III)	Network entry	RS
7068	RS Initial Ranging with Non-transparent RS	Kanchei (Ken) Loa	Institute for Information Industry (III)	Network entry	RS
7074	GNSS-equipped RS CDMA-based Ranging	Kanchei (Ken) Loa	Institute for Information Industry (III)	Network entry	RS
7088	Moving Relay Station Preamble/Segment Selection	Hang Zhang	Nortel, University of Waterloo, III	Network entry	RS
7097	RS Initial Network Entry	Hang Zhang	Nortel	Network entry	RS
7144	Relay Grouping and PUSC Segment Selection for FCH/MAP Transmission	Hang Zhang	Nortel, III, MITRE,ITRI/NCTU	Network entry	RS

Network entry – Connection & addr

No	Title	First Author	Company	Topic	Sub-topic
6156	Connections in a Multihop Relay Network	Shyamal Ramachandran	Motorola	Network entry	Connections & addressing
6158	Routing Announcements for Network Entry Support	Shyamal Ramachandran	Motorola	Network entry	Connections & addressing
6241	RS 802.16e Preamble Transmission	Hang Zhang,	Nortel	Network entry	Connections & addressing
6242	RS Configuration Description Broadcast	Hang Zhang,	Nortel	Network entry	Connections & addressing
6243	RS Configuration Signaling	Hang Zhang,	Nortel	Network entry	Connections & addressing
6274	Proposal on addresses, identifiers and types of connections for 802.16j	Jerry Sydir	Intel, Samsung, KDDI, ITRI, IIR, Telcordia, Mitsubishi	Network entry	Connections & addressing
6281	Management CID allocation	Kenji Saito,	KDDI R&D Labs., Samsung Electronics, Motorola	Network entry	Connections & addressing
7091	Constraint-Based Routing for End-to-End MMR Cell Connection Management	G.Q Wang	Nortel	Network entry	Connections & addressing
7092	MMR Network end-to-end routing and connection management	G.Q Wang	Nortel	Network entry	Connections & addressing
7095	Introduction of RS ID	Hang Zhang	Nortel	Network entry	Connections & addressing
7108	Enabling MAC tunneling over HARQ in 802.16j	Jeffrey Z. Tao	Mitsubishi Electric Research Lab, Mitsubishi Electric Corp	Network entry	Connections & addressing
7115	Relay Tunnel Connection for 802.16j	Jeffrey Z. Tao	Mitsubishi Electric Research Lab, Mitsubishi Electric Corp	Network entry	Connections & addressing
7126	Routing with CID Encapsulation	Aik Chindapol	Siemens	Network entry	Connections & addressing
7167	Encapsulation of CID	Changkyoon Kim, Hyung Kee Kim	Samsung Thales	Network entry	Connections & addressing

Bandwidth Request

No	Title	First Author	Company	Topic	Sub-topic
7011	Distributed Bandwidth Request and Allocation in Multi-Hop Relay	Kerstin Johnsson	Intel Corp., Fujitsu	Bandwidth request	
7034	Relay Support for Distributed Scheduling and its Bandwidth Request/Allocation Mechanism	Haihong Zheng,	Nokia, Siemens	Bandwidth request	
7039	Resource Request for Bandwidth	Yousuf Saifullah,	Nokia, Fujitsu, Intel	Bandwidth request	
7042	Channel Access for Multihop Relay Chains	Saravanan Govindan,	Panasonic Singapore Laboratories, Toshiba Research Europe, US ARMY	Bandwidth request	
7057	MS CDMA-based BR with Transparent RS	Kanchei (Ken) Loa	Institute for Information Industry (III), Nortel	Bandwidth request	Ranging
7058	MS CDMA-based BR with Non-transparent RS	Kanchei (Ken) Loa	Institute for Information Industry (III), Nortel	Bandwidth request	Ranging
7101	Dedicated Relay Uplink Resource Assignment for Control Signaling and Data Transmission	Derek Yu	Nortel	Bandwidth request	
7128	CDMA Code Partitioning for R-UL Ranging Control	Sungcheol Chang	ETRI	Bandwidth request	
7148	Bandwidth Request for Distributed Systems	Masato Okuda	Fujitsu	Bandwidth request	
7166	Dedicated Bandwidth Reservation for RS in MR Networks	Byung-Jae Kwak,	ETRI, Samsung Thales, Fujitsu, Siemens	Bandwidth request	

Construction & tx of M-PDUs

No	Title	First Author	Company	Topic	Sub-topic
7009	MAC PDU concatenation in RS	Yuefeng Zhou	Fujitsu Laboratories of Europe Ltd, ZTE. Communications, ZTE San Diego Inc., Mitsubishi Electric Research Lab, Mitsubishi Electric Corp	Construction & transmission of MAC PDUs	
7022	MAC-PDU Reconstruction at RS	Masato Okuda	Fujitsu	Construction & transmission of MAC PDUs	
7033	Transmission Scheme of MAC Management Message towards a RS Group in Multi-Hop Relay System	Haihong Zheng,	Nokia	Construction & transmission of MAC PDUs	
7094	MAC PDU Design for Supporting Data Forwarding Schemes in 802.16j	Hang Zhang	Nortel	Construction & transmission of MAC PDUs	
7118	MAC PDU Construction on relay links	Jeffrey Z. Tao	Mitsubishi Electric Research Lab, Mitsubishi Electric Corp	Construction & transmission of MAC PDUs	

Measurement & reporting

No	Title	First Author	Company	Topic	Sub-topic
6120	The 2nd fast feedback channel region to reduce transfer delay of fast feedback data for 2-hop MMR system	Ki Seok Kim	ETRI, Samsung Thales	Measurement & reporting	
6248	R-link TLV for MMR relay link monitoring and reporting procedure	G.Q. Wang,	Nortel	Measurement & reporting	
7043	Interference Measurement and Neighborhood Discovery for IEEE 802.16j Multi-hop Relay Network	I-Kang Fu	NCTU/ITRI, Toshiba Europe	Measurement & reporting	Interference
7065	RS Location Report for Neighbor Discovery	Kanchei (Ken) Loa	Institute for Information Industry (III), Nokia	Measurement & reporting	Location
7123	Relay-Assisted Scheduling for Exploiting Multi-User Diversity on Access Links	Karthikeyan Sundaresan	Broadband and Mobile Networking Dept, NEC Labs America	Measurement & reporting	CQI
7129	RS Measurements and Channel Estimation between RS and MS	Sungcheol Chang	ETRI	Measurement & reporting	CQI
7138	Messages for Requesting and Providing Location Information in 802.16	Rakesh Taori,	Samsung Advanced Institute of Technology	Measurement & reporting	Location
7140	Radio Resource Reuse in access zone and relay zone	Youngbin Chang	Samsung Electronics	Measurement & reporting	
7019	Interference Measurement by RS Sounding in MR Networks	Wei-Peng Chen	Fujitsu, ITRI, Toshiba	RRM, Scheduling & Interference control	
7020	Interference Detection and Measurement in OFDMA Relay Networks	Wei-Peng Chen	Fujitsu Laboratories of America and Fujitsu Microelectronics Canada Inc., Toshiba Research Europe, Industrial Technology Research Institute (ITRI) and National Chiao Tung University (NCTU)	RRM, Scheduling & Interference control	

Mobility management

- MS
- RS
- Sleep/idle/MBS(1)
- Periodic & unsolicited ranging (4 – same author)
- MRS (1)

MS Handover

No	Title	First Author	Company	Topic	Sub-topic
6159	Signaling for Efficient Routing	Eugene Visotsky	Motorola	Mobility management	Handover (MS)
6245	MS Intra-Cell FBSS	Hang Zhang,	Nortel	Mobility management	Handover (MS)
7036	MS Handover with Relay	Yousuf Saifullah,	Nokia, Siemens Corporate Research	Mobility management	Handover (MS)
7047	Proposal for MS handover procedure in an MR Network	Ray-Guang Cheng	NTUST/ITRI	Mobility management	Handover (MS)
7063	MS Handover Ranging with RS	Kanchei (Ken) Loa	Institute for Information Industry (III), Nortel	Mobility management	Handover (MS)
7071	MS Handover with Transparent RS	Kanchei (Ken) Loa	Institute for Information Industry (III)	Mobility management	Handover (MS)
7072	MS Handover with Non-Transparent RS	Kanchei (Ken) Loa	Institute for Information Industry (III)	Mobility management	Handover (MS)
7076	Association Procedure in 802.16j	Yanling Lu,	Hisilicon Technologies, Intel Corporation, Ewha Womans University, Huawei Technologies	Mobility management	Handover (MS)
7082	Overview of the proposal for MS MAC handover procedure in an MR Network	Hyunjeong Lee	Intel, Samsung, Ewha Womans University	Mobility management	Handover (MS)
7083	MS MAC Handover Procedure in an MR Network – Handover Decision and Initiation	Hyunjeong Kang	Samsung, Intel, Ewha Womans University	Mobility management	Handover (MS)

MS Handover (cont.)

No	Title	First Author	Company	Topic	Sub-topic
7084	MS MAC Handover Procedure in an MR Network – Handover Execution	Hyunjeong Lee	Intel, Samsung, Ewha Womans University	Mobility management	Handover (MS)
7085	MS MAC Handover Procedure in an MR Network-Termination	Hyunjeong Lee	Intel, Samsung, Ewha Womans University	Mobility management	Handover (MS)
7086	Using the Relative Thresholds in Handover Procedure	Ardian Ulvan	Czech Technical University in Prague	Mobility management	Handover (MS)
7119	Macro Diversity Handover and Fast Access Station Switching for MMR Network	Shengjie Zhao	Mitsubishi Electric Research Lab, Mitsubishi Electric Corp	Mobility management	Handover (MS)
7139	Reduced Neighbor Information Generation and Customized Delivery	Rakesh Taori,	Samsung Advanced Institute of Technology, Samsung Electronics, Intel, ITRI	Mobility management	Handover (MS)
7143	MS scanning support by RS	Hyunjeong Kang	Samsung Electronics	Mobility management	Handover (MS)
7146	MS handover procedure in relay mode	Gang Shen	Alcatel-Lucent	Mobility management	Handover (MS)
7150	Early Handover Trigger	Yong-Hoon Choi,	Kwangwoon University, ETRI	Mobility management	Handover (MS)
7151	RS-initiated Handover Procedure for Handover-unmanageable RS	Woosin Lee,	Kwangwoon University, ETRI	Mobility management	Handover (MS)
7152	RS-initiated Handover Procedure for Handover-manageable RS	Woosin Lee,	Kwangwoon University, ETRI	Mobility management	Handover (MS)
7165	MS Handover support in Transparent RS-Slides	David Comstock	Huawei Technologies	Mobility management	Handover (MS)

RS Handover

No	Title	First Author	Company	Topic	Sub-topic
7037	MRS Handover	Yousuf Saifullah,	Nokia, ETRI	Mobility management	Handover (RS)
7054	Deactivation procedure of mobile RS	Su Chang Chae	ETRI, Samsung Thales	Mobility management	Handover (RS)
7089	RS Handover	Hang Zhang	Nortel	Mobility management	Handover (RS)
7107	Handover and its network model for IEEE 802.16j	Yong Sun,	Toshiba Research Europe Limited	Mobility management	Handover (RS)
7122	Mobile RS Handover	Sungkyung Kim	ETRI, Nokia	Mobility management	Handover (RS)
7133	NEMO Basic Support Capability for Mobile RS	Jai Eu	Jcast Networks	Mobility management	Handover (RS)
7147	Handover of Mobile Relay Station	Kaibin Zhang	Alcatel-Lucent	Mobility management	Handover (RS)

Sleep/Idle/MBS

No	Title	First Author	Company	Topic	Sub-topic
7007	A proposal for timing compensation of sleep mode in MR	Keiichi Nakatsugawa	Fujitsu Laboratories Ltd., Fujitsu Laboratories of Europe Ltd., National Chiao Tung University (NCTU) /Industrial Technology Research Institute (ITRI)	Mobility management	Sleep mode
7010	Sleep Mode in MR network	Yuefeng Zhou	Fujitsu Laboratories of Europe Ltd, Fujitsu Laboratories Ltd., National Chiao Tung University (NCTU) /Industrial Technology Research Institute(ITRI),Alcatel Shanghai Bell Co., Ltd.,Mitsubishi Electric Research Lab	Mobility management	Sleep mode
7035	MS Sleep Mode in MR network	Yousuf Saifullah,	Nokia, Institute for Information Industry, Siemens Corporate Research	Mobility management	Sleep mode
7044	Sleep Mode Operations in MR Network for Centralized Scheduling Approach	Shiao-Li Tsao	NCTU/ITRI, Fujitsu, Nokia and III	Mobility management	Sleep mode
7066	RS Sleep Mode	Kanchei (Ken) Loa	Institute for Information Industry (III)	Mobility management	Sleep mode
7004	A proposal for timing compensation of idle mode in MR	Keiichi Nakatsugawa	Fujitsu Laboratories Ltd.,Fujitsu Laboratories of Europe Ltd.,National Chiao Tung University(NCTU) /Industrial Technology	Mobility management	Idle mode
7030	MRS Paging Group Update	Shashikant Maheshwari,	Nokia	Mobility management	Idle mode
7005	A proposal for synchronous MBS transmission in MR	Keiichi Nakatsugawa	Fujitsu Laboratories Ltd., Fujitsu Laboratories of Europe Ltd., National Taiwan University (NTU) National Chiao Tung University (NCTU), Industrial Technology Research Institute (ITRI),Alcatel Shanghai Bell Co., Ltd.,Toshiba Research Europe Ltd.,Mitsubishi Electric Research Lab	Mobility management	MBS

Other Ranging

No	Title	First Author	Company	Topic	Sub-topic
7059	MS Periodic Ranging with Non-transparent RS	Kanchei (Ken) Loa	Institute for Information Industry (III), Nortel, Institute for Infocomm Research	Mobility management	Periodic & unsolicited ranging
7060	MS Periodic Ranging with Transparent RS	Kanchei (Ken) Loa	Institute for Information Industry (III), Nortel, Institute for Infocomm Research	Mobility management	Periodic & unsolicited ranging
7061	Unsolicited RNG-RSP with Transparent-RS	Kanchei (Ken) Loa	Institute for Information Industry (III), Nortel, Institute for Infocomm Research	Mobility management	Periodic & unsolicited ranging
7062	Unsolicited RNG-RSP with Non-transparent RS	Kanchei (Ken) Loa	Institute for Information Industry (III), Nortel, Institute for Infocomm Research	Mobility management	Periodic & unsolicited ranging

MRS

No	Title	First Author	Company	Topic	Sub-topic
7087	Moving Relay Station Operation	Hang Zhang	Nortel	Mobility management	MRS

Routing & path management

No	Title	First Author	Company	Topic	Sub-topic
7027	End-to-End Throughput Metrics for QoS Management 802.16j MR Systems	Ozgur Oyman	Intel, Motorola	Routing & path management	
7031	Path Management in Multi-hop Relay System	Haihong Zheng,	Nokia, Huawei Technologies Co. Ltd	Routing & path management	
7032	Topology Discovery in Multi-hop Relay System	Haihong Zheng,	Nokia, Huawei Technologies Co. Ltd	Routing & path management	
7046	Path selection and reselection for RSs in IEEE 802.16j Multi-hop Relay Network	Chie Ming Chou	ITRI/NCTU	Routing & path management	
7048	Efficient Systematic CID Allocation and Relay Path Configuration Mechanism for IEEE 802.16j (Multi-hop Relay)	Aik Chindapol	Siemens, Telcordia, ITRI, ETRI, Samsung Thales	Routing & path management	
7079	A new metric for multi-hop path selection	Yukihiro Takatani	Hitachi, Ltd.	Routing & path management	
7093	DSx message extension for Constraint-Based routing and CID/path binding	G.Q Wang	Nortel	Routing & path management	
7131	BS Routing function for Moving RS in Moving BS Mode	Hang Zhang,	Nortel	Routing & path management	
7153	Link Adaptive Multi-hop Path Management for IEEE 802.16j	Hyukjoon Lee	Kwangwoon University, ETRI	Routing & path management	
7161	An Framework for Multi-hop Path Management in MMR Networks	Erwu Liu,	Alcatel-Lucent	Routing & path management	
7168	Simple Path Management by Encapsulation in MMR system	Changkyoon Kim, Kyu Ha Lee, Hyung Kee Kim	Samsung Thales	Routing & path management	

RRM, etc.

No	Title	First Author	Company	Topic	Sub-topic
7026	RS safety zone	Mike Hart	Fujitsu	RRM, Scheduling & Interference control	
7078	Distributed Scheduling in 802.16j system	Yanling Lu,	Hisilicon Technologies	RRM, scheduling & interference control	
7104	Frequency Domain Power Allocation for Stationary Relay Links	Seung-Jun Kim	NEC Laboratories America	RRM, scheduling & interference control	
7155	Mobile Station (MS) Classifications for Efficient Resource Utilization	Anxin Li,	DoCoMo Beijing Labs, DoCoMo USA Labs	RRM, scheduling & interference control	

PHY

No	Title	First Author	Company	Topic	Sub-topic
7002	DL HARQ with Relays	Junichi Suga	Fujitsu, Nokia, Siemens, Samsung Thales	PHY	HARQ
7014	Closed loop power control	Mike Hart	Fujitsu, Nokia, ITRI, ETRI, Samsung Thales	PHY	Power control
7029	UL HARQ with Relays	Haihong Zheng,	Nokia, Fujitsu Laboratories Ltd., Siemens, ETRI, Samsung Thales	PHY	HARQ
7052	Demodulation and Forwarding method in Relay Station	Su Chang Chae	ETRI, SAMSUNG THALES	PHY	Coding
7073	RS Autonomous Synchronization	Kanchei (Ken) Loa	Institute for Information Industry (III)	PHY	Sync
7080	AAS Direct Signaling Methodologies to Support High Capacity MR-BS to RS Links	Dale Branlund	BRN Phoenix, DIRECTV	PHY	AAS
7111	HARQ method for two-hop and multi-hop relays	Guosen Yue	NEC-LABS	PHY	HARQ
7116	Proposal for Adaptive HARQ ACID Expansion on Relay Links	Toshiyuki Kuze	Mitsubishi Electric Corp, Mitsubishi Electric Research Lab	PHY	HARQ
7121	Rate Compatibility and Incremental Redundancy HARQ for 802.16j LDPC	Wataru Matsumoto	Mitsubishi Electric Corp, Mitsubishi Electric Research Lab	PHY	Coding
7124	Cooperative Relaying in Downlink for IEEE 802.16j	Jimmy Chui	Siemens, Samsung Thales, ETRI, DoCoMo Beijing Labs, DoCoMo USA Labs, Nokia	PHY	MIMO
7163	HARQ Mechanisms in Multi-hop Relay	Wei Ni	Alcatel-Lucent, DoCoMo	PHY	HARQ
7164	HARQ for Multi-hop Relaying System-Slides	David Comstock	Huawei Technologies	PHY	HARQ

Eval Methodology

No	Title	First Author	Company	Topic
7105	Proposal for additional pathloss models for 802.16 links with relay stations	A. F. Molisch	Mitsubishi Electric	Evaluation methodology
7137	ART-ART channel Model	Dean Kitchener	Nortel	Evaluation methodology

Categories

- Relay concepts (4)
- Security (5)
- Frame structure (33)
- Network entry (33)
- Bandwidth request (10)
- Construction & transmission of M-PDUs (5)
- Measurement & reporting (7)
- Mobility management (41)
- Routing & path management (11)
- RRM, scheduling & interference control (6)
- PHY (12)
- Evaluation methodology (2)

Planning

<table>
<tr><th></th><th>Morning (8:00 – 11:00)</th><th colspan="2">Afternoon (12:30 – 18:00)</th><th colspan="2">Evening (19:00 – 22:00)</th></tr>
<tr><td>Mon</td><td>X</td><td colspan="2">Opening</td><td>Relay Concepts & Security (9)</td><td>PHY - HARQ (M) (6)</td></tr>
<tr><td rowspan="2">Tue</td><td>Frame structure (P & M) (33)
(Viscount 2)</td><td>Others (M) (11)
12:30 – 13:30 (MR3-4)</td><td>MM - Sleep / Idle / MBS (M) (8)
(MR3-4)
15:30 – 18:00</td><td>X</td><td rowspan="2">Wrap up
(Viscount 2)
(21:30)</td></tr>
<tr><td>NE / BW Req (J) (43)
(MR3-4)</td><td colspan="2">MM – HO, MRS, Ranging
(J & P) (33)
(Viscount 2)</td><td>Routing & path mgmt (J) (11)
(Viscount 2)</td></tr>
<tr><td rowspan="2">Wed</td><td>RRM / Measurement & Reporting (P) (13) / Frame (P & M) (33)
(ROOM)</td><td colspan="2">Frame (P & M) (33)
(ROOM)</td><td rowspan="2">Wrap up
(Viscount 2)
17:00</td><td rowspan="2">Social</td></tr>
<tr><td>MM – HO, MRS, Ranging
(J & P) (33)
(ROOM)</td><td colspan="2">NE / BW Req (J) (43)
(ROOM)</td></tr>
<tr><td>Thu</td><td>Joint (inc. eval methodology)</td><td colspan="3">Joint & Closing</td><td></td></tr>
</table>

Others (Tue PM):

- Construction transmission of M-PDUs
- PHY - others

Tentative Schedule (from Tutorial, Mar. 2006)

Year	Month	802.16 session	Actions
2006	Jan.	#41 Interim	SG: the 3rd meeting – PAR Completion
	Mar.	#42 Plenary	Tutorial Session on 802.16 MMR 802 EC to approve 802.16j PAR
	May	#43 Interim	1st TG meeting
	July	#44 Plenary	2nd TG meeting Require Document & Procedure for proposal Selection & merging
	Call for Contribution		
	Sept.	#45 Interim	3rd TG meeting Presentation & Selection
	Drafting standard		
	Nov.	#46 Plenary	1st WG letter ballot
2007	**Jan.**	**#47 Interim**	2nd WG letter ballot
	Mar.	#48 Plenary	1st sponsor ballot
	May.	#49 Interim	Sponsor Recirculation
	July.	#50 Plenary	Submission to Rev. Com
	Sep.	#51 Interim	SA Approval

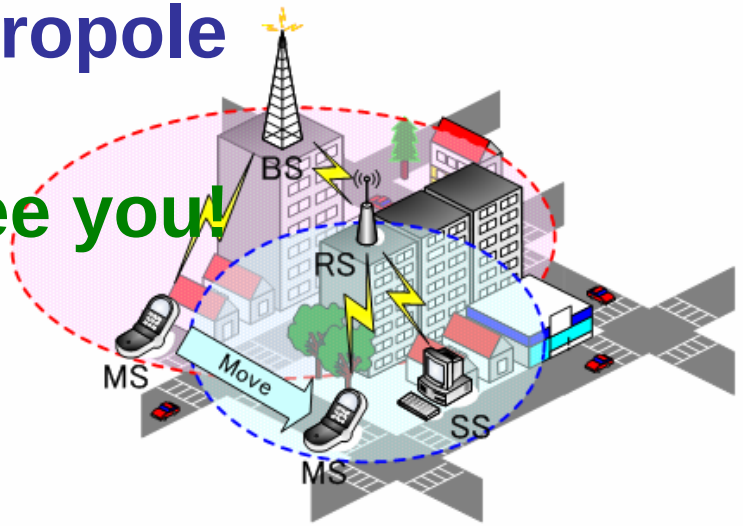
Motion expected to come at Relay TG Closing

1. To authorize the TG Chair to issue a call for comments

Relay-TG Meeting Calendar This Week

15:00-18:00, Mon. 15 Jan. @Sandringham 1, 3rd-F
19:00-22:00, Mon. 15 Jan. @Viscount 2, 1st-F
08:00 – 22:00, Tue. 16 Jan. @Viscount 2, 1st-F
8:00-12:30/15:30-18:00 @MR3-4, Mes.-F
08:00 – 18:00, Wed. 17 Jan.
08:00 – 18:00, Thu. 18 Jan.

Hilton London Metropole
London, UK
Please Join and see you!



*Reference: C802.16-005/013