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E6655A WiMAX™ Lab Application Revision History

epsg1126385

Application Compatibility Matrix:

E6651A	E6651A API	N6421A	N6421A API	E6655A	E6655A API	N6422C	N6423C
6.6.1.0	6.6.1.0	6.6.1.0	6.6.1.0	6.6.1.0	6.6.1.0	-	-
6.5.3.0	6.5.3.0	6.5.3.0	-	6.5.3.0	6.5.3.0	C.06.00	C.06.00
6.5.1.0	6.5.1.0	6.5.1.0	-	6.5.2.0	6.5.2.0	-	-
6.5.1.0	6.5.1.0	6.5.1.0	-	6.5.1.0	-	-	-
6.4.2.0	6.4.2.0	6.4.2.0	-	6.4.2.0	-	C.05.00	C.05.00
6.4.1.0	6.4.1.0	6.4.1.0	-	6.4.1.0	-	-	-
5.3.3.0	6.3.3.0	6.3.1.0	-	6.3.1.0	-	C.04.00	C.04.00
5.3.1.0	6.3.1.0	6.3.1.0	-	6.3.1.0	-	C.03.00	C.03.00
5.2.1.1	5.2.1.0	5.2.1.1	-	5.2.1.0	-	C.02.05	C.02.05
5.1.1.0	5.1.1.0	5.1.1.0	-	5.1.1.0	-	-	-
5.0.1.0	5.0.1.0	5.0.1.0	-	5.0.1.0	-	-	-

E6655A Revision 6.6.1.0 – May 14th 2010 – Feature Release

Requires E6651A firmware revision 5.6.1.0 or 6.6.1.0

New features

- Enhanced throughput up to ~ 20Mbps End-to-End with E6655A Lab Application on A.2 E6651A HW (~15Mbps on A.1 E6651A HW)
- Added ability to preset, store and recall E6655A configuration
- E6651A automatically put into E6655A operation mode when E6655A starts

Previous Release Information

E6655A Revision 6.5.2.0 – May 27th 2009 – Feature Release

Requires E6651A firmware revision 5.5.1.0 or 6.5.1.0

New features

- E6655A Lab Application now supports remote control with the E6655A API.

E6655A Revision 6.5.1.0 – April 30th 2009 – Feature Release

Requires E6651A firmware revision 5.5.1.0 or 6.5.1.0

New features

- Alignment with E6651A firmware releases 6.5.1.0 and 5.5.1.0
- Average throughput measurement changed to a moving average over last 5 seconds.

E6655A Revision 6.4.2.0 – October 31st 2008 – Maintenance Release

Requires E6651A firmware revision 5.4.2.0 or 6.4.2.0

Maintenance Release

- DL Fragmentation supported
- Maximum PDU size disabled when fragmentation is disabled

E6655A Revision 6.4.1.0 – September 4th 2008 – Feature Release

Requires E6651A firmware revision 5.4.1.0 or 6.4.1.0

New features

- Enhanced Throughput - supports higher data rates in Uplink and Downlink with E6651A Test Set firmware 5.4.1.0 and 6.4.1.0

E6655A Revision 6.3.1.0 – March 28th 2008 – Feature Release

Requires E6651A firmware revision 5.3.1.0 or 6.3.1.0

New features

- Support for Wave 2 features in 6.3.1.0 firmware
- 2 network devices can be configured in Network Setting window

E6655A WiMAX Lab Application Revision 5.2.1.0

Requires E6651A firmware revision 5.2.1.1

New features

- IPX Protocol no longer required – Test Set IP address required
- HARQ end-to-end supported

- ARQ end-to-end supported
- HARQ Service added to Uplink and Downlink flows
- ARQ Service added to Uplink and Downlink flows

E6655A WiMAX Lab Application Revision 5.1.1.0

Requires E6651A firmware revision 5.1.1.0

New features

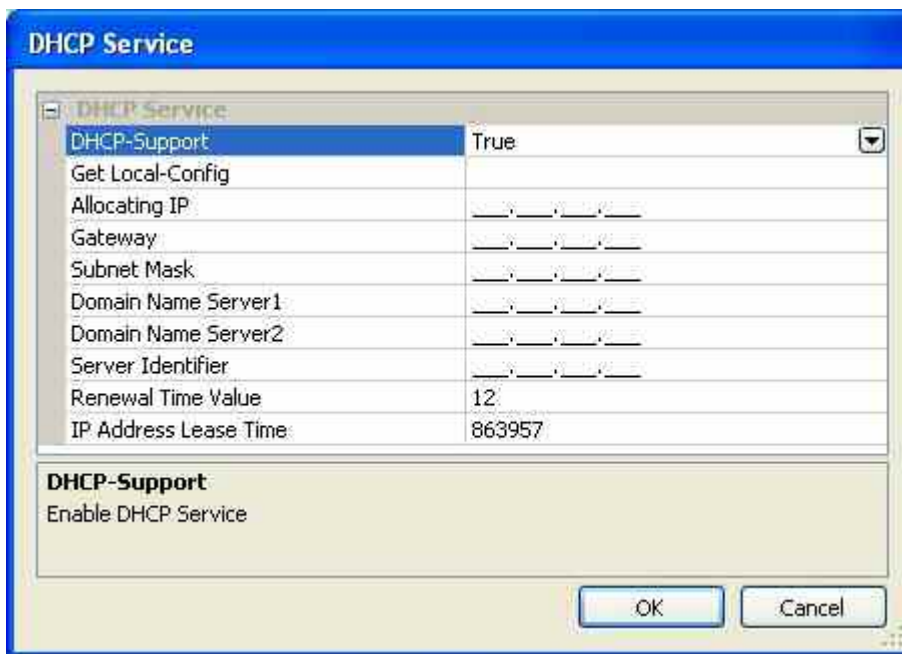
- Added DHCP capability server for MS
- Enhanced UL / DL Service flow configuration
- Added **Test Connection** feature to verify connection between E6651A and E6655A


Changes to E6655A Operation

Using the DHCP capability

The E6655A now adds the ability to simulate a DHCP server to allow a MS to use DHCP to obtain IP configuration.

DHCP configuration is selectable from the “Options” menu. The E6655A Lab Application must be stopped before the items in the Options menu can be accessed. When selecting the DHCP configuration from the Settings menu, the following window is displayed.



DHCP-Support	Set to “True” to enable DHCP Server capability Set to “False” to disable DHCP Server capability
Get Local-Config	Pressing the  button performs a DHCP request from the E6655A to your local network and populates the remaining DHCP fields (other than

	Allocating IP) with the values obtained from a DHCP server on your local network.
Allocating IP	IP Address to be allocated to the MS.
Gateway	The IP Address of the gateway that will be provided to the MS
Subnet Mask	The subnet mask
Domain Name Server1/2	Primary and Secondary DNS Server to be provided to the MS
Server Identifier	
Renewal Time Value	

When the E6655A provides DHCP service for a MS, the E6655A screen shows the DHCP-OFFER and DHCP-ACK messages:

The screenshot shows the Agilent E6655A WiMAX Lab Application interface. A 'DHCP Service' dialog box is open, displaying the following configuration:

Parameter	Value
DHCP-Support	True
Get Local-Config	
Allocating IP	156.141.120.10_
Gateway	156.141.104._1
Subnet Mask	255.255.248._0
Domain Name Server1	156.141._48._25
Domain Name Server2	156.141._48._17
Server Identifier	156.141.110._83
Renewal Time Value	12

Below the configuration table, the dialog box has a section titled 'Allocating IP' with the text 'Allocating Ip-Address for MS' and 'OK' and 'Cancel' buttons.

The background window shows a log of network messages:

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[13:22:42] [Recv:BSE]=====
[13:22:47] [Recv:BSE]=====
[13:23:37] BSE: Socket is disconnected.
[13:23:37] G/W: Network adapter interface o
[13:35:25] G/W: Network adapter interface o
[13:35:25] BSE: Socket is connected.
[13:38:29] BSE: Socket is disconnected.
[13:38:29] G/W: Network adapter interface o
[13:38:45] BSE: Socket is connected.
[13:38:46] BSE: Socket is disconnected.
[13:41:59] G/W: Network adapter interface o
[13:41:59] BSE: Socket is connected.
[13:42:42] [Recv:BSE]=====
[13:42:42] BSE >> RES INDICATOR
[13:42:42] BSE << SF CREATE REQ(UL)
[13:42:42] BSE >> SF CREATE RSP
[13:42:42] BSE << SF CREATE REQ(DL)
[13:42:42] BSE >> SF CREATE RSP
[13:42:45] [Recv:BSE]=====[00303]
[13:42:49] [Recv:BSE]=====[00273]
[13:42:49] [DHCP BOOTProtocol] DHCP-OFFER (156.141.120.10)
[13:42:49] [DHCP BOOTProtocol] DHCP-ACK (156.141.120.10)
[13:42:52] [Recv:BSE]=====[00089]
[13:42:54] [Recv:BSE]=====[00123]
[13:42:56] [Recv:BSE]=====[00123]
[13:42:58] [Recv:BSE]=====[00105]
[13:43:00] [Recv:BSE]=====[00123]
[13:43:03] [Recv:BSE]=====[00241]

```

DL Service Flow Configuration Options

Downlink Service Flow Parameters

Service Flow Parameters

SFID	00000002
CID	0501
Service Class Name	
MBS Service	0: No Available MBS
QoS Parameter Set Type	[0x05]
Provisioned Set	True
Admitted Set	False
Active Set	True
Traffic Priority	0
Maximum STR	2000000
Maximum TB	2000000
Maximum RTR	2000000
Request/Transmission Policy	[0x30]
No Fragment Data	False
No Suppress payload header	True
No Pack multi SDU	True
No include CRC in MAC PDU	False
Tolerated Jitter	0
Maximum Latency	506
Fixed-length SDU	False
SDU Size	49
Target SAID	FFFF
CS Specification	01: Packet, IPv4
Type of DDSservice	0: Unsolicited Grant Service
SDU Inter-arrival Interval	1000
Time Base	0
Paging Preference	0: No Paging Generation
MBS Zone ID Assignment	0
SN Feedback Enable	0: SN Feedback is Disabled(default)
FSN Size	1: 11-bit FSN(default)
Unsolicited Grant Interval	0
Unsolicited Polling Interval	0
PDU SN ESHR	0: No support for PDU SN in this Connection
HARQ Service Flows	0: Non HARQ (Default)

SFID
Service Flow ID(HEX)

OK Cancel

UL Service Flow Configuration Options

Uplink Service Flow Parameters

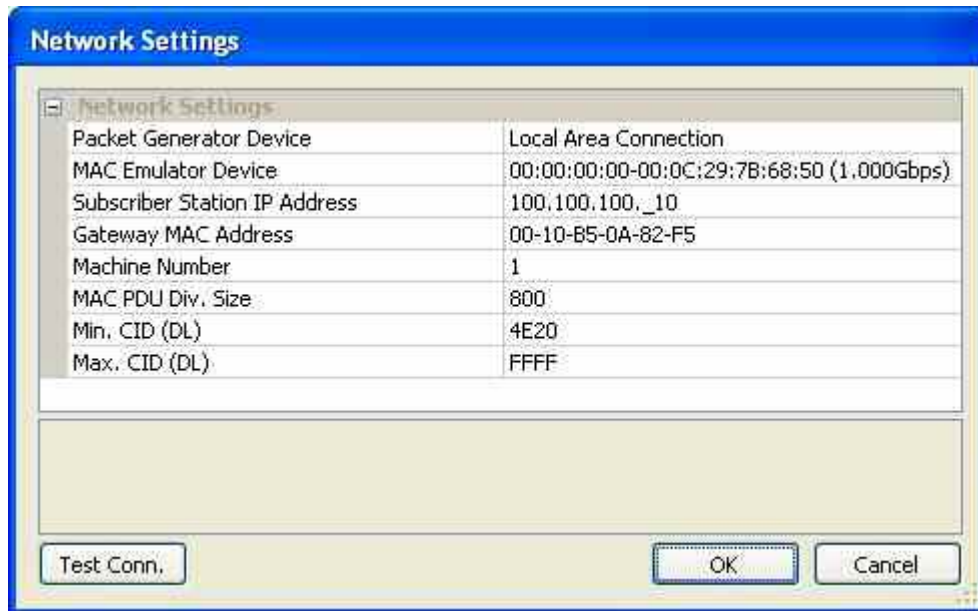
Service Flow Parameters	
SFID	00000001
CID	0401
Service Class Name	
MBS Service	0: No Available MBS
QoS Parameter Set Type	[0x05]
Provisioned Set	True
Admitted Set	False
Active Set	True
Traffic Priority	0
Maximum STR	2000000
Maximum TB	2000000
Maximum RTR	2000000
Uplink Grant Scheduling Type	2: for BE
Request/Transmission Policy	[0x37]
No Broadcast BW	True
No Multicast BW	True
No Piggyback Data	True
No Fragment Data	False
No Suppress payload header	True
No Pack multi SDU	True
No include CRC in MAC PDU	False
Tolerated Jitter	0
Maximum Latency	506
Fixed-length SDU	False
SDU Size	49
Target SAID	FFFF
CS Specification	01: Packet, IPv4
Type of DDSservice	0: Unsolicited Grant Service
SDU Inter-arrival Interval	1000
Time Base	0
Paging Preference	0: No Paging Generation
MBS Zone ID Assignment	0
SN Feedback Enable	0: SN Feedback is Disabled(default)
FSN Size	1: 11-bit FSN(default)
Unsolicited Grant Interval	0
Unsolicited Polling Interval	0
PDU SN ESHR	0: No support for PDU SN in this Connection
HARQ Service Flows	0: Non HARQ (Default)

SFID
Service Flow ID(HEX)

OK Cancel

Test Connection Feature

In the network settings window, pressing the **Test Conn** button verifies that the E6651A and E6655A have been configured correctly.



When released, updates are available for download from <http://www.agilent.com/find/E6651A>. To receive notification of updates, please subscribe to the Agilent e-mail update service at <http://www.agilent.com/find/emailupdates>.