LTE MME Reference Application

Release Notes

1225417 1.12a

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Radisys Corporation

9450 Carroll Park Drive San Diego, CA 92121-2256

Phone: *+1 (858) 882-8800*

Fax: *+1 (858) 777-3389*

Web: *http://www.radisys.com*

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Contributors: Continuous Computing Development Team, Naveen D’cruz.

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Software and Product Information

Software Information

The software provided on the delivery media is:

Table 1-1: Software information

Software name	LTE MME Reference Application
Part number	1000417
Version	1.1

Product Information

This software is part of:

Table 1-2: Product information

Product name	LTE MME Reference Application
Part number	1000417

Fault-Tolerance/High-Availability Compatibility

None.

Release Information

This software release version 1.1 is an initial general release.

Options

None.

Description

The motivation behind this software release is to build an reference application to process the signaling between UE and Core Network.

This software is a complete implementation of the following specification(s):

1. 3GPP TS 24.301 V8.2.1 (2009-06): Non-Access-Stratum (NAS) protocol for Evolved Packet System (EPS).
2. 3G TS 36.413, version 8.1.0 (2008-03), E-UTRAN S1 Application Protocol.
3. 3G TS 36.413, version 8.2.0 (2008-06), E-UTRAN S1 Application Protocol.
4. 3G TS 29.274, version 1.3.0 (2008-10), Evolved GPRS Tunnelling Protocol for control plane.
5. 3G TS 29.281, version 8.1.0 (2008-10), GPRS Tunnelling Protocol -User Plane.

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LTE-MME Reference Application Features

The features added for this release are:

1. MME Stack Configure all protocol layers.
2. Configure and setup MME.
3. Setup S1AP signaling connection with eNodeB.
4. Supports encoding/decoding of EMM/ESM messages.
5. Supports co-located HSS.
6. Supports single session per UE.
7. Supports multiple Attach and Detach procedures.
8. Supports Data transfer between two end application.
9. Extensive debugging support to ease system integration and testing.
10. ERAB setup release from CNE.
11. CNE initiated Detach Procedure.
12. Multiple UE each with single Dedicated Bearer support.
13. GUTI Attach Support.

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Interface Changes

This section describes the changes made to the interfaces.

3.1 Upper Interface

MME Application is at top most layer in the protocol stack, it does not have any upper interface.

Backward Compatibility

As there is no upper interface, backward compatibility is not applicable.

3.2 Lower Interface

MME Application has two lower interfaces:

3.2.1 SZT Interface

The SZT upper interface of S1AP layer is used by MME Application.

Refer to the *SZT Interface Service Definition* of S1AP for details.

3.2.2 EGT Interface

The EGT upper Interface of eGTP layer is used by MME Application.

Refer to the *EGT Interface Service Definition* for details.

3.3 Layer Manager

Initial release of layer manager interface.

Refer to the *LTE-MME Reference Application Service Definition* for details.

Backward Compatibility

This is an initial release 1.1, backward compatibility is not applicable.

3.4 System Services

Initial release of the systems services interface.

Backward Compatibility

This is an initial release 1.1, backward compatibility is not applicable.

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Code Fixes

There are no code fixes as this is the initial release of the LTE-MME Reference Application.

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Open Issues

There no open issues relevant with LTE-MME Reference Application release for the version 1.1.

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File Changes

This section lists all the files added, deleted, or modified for this release.

6.1 Files Added

This section lists the files added for this release.

6.1.1 Common Files

The common files added for this release are:

- **lvb.c**
- **lvb.h**
- **lvb.x**

6.1.2 Product Files

The product files added for this release are:

- **vb.h**
- **vb.x**
- **vb_emm.c**
- **vb_mme.c**
- **vb_ptli.c**
- **vb_app.x**
- **vb_emm.c**
- **vb_apputl.c**
- **vb_hss_common.x**
- **vb_err.h**

- **vb_esm.c**
- **vbsm_vbcfg.c**
- **vb_hss_autn.x**
- **vbsm_utl.c**
- **vb_esm_gtp.c**
- **vb_eu.x**
- **vb_eu_ex_ms.c**
- **vb_eu_ptli.c**
- **vb_hss.h**
- **vb_hss.x**
- **vb_hss_autn.c**
- **vb_hss_autn.h**
- **vb_hss_proc.c**
- **vb_hss_uedb.c**
- **vb_id.c**
- **vb_mi.c**
- **vb_mme.c**
- **vb_mme_ex_ms.c**
- **vb_mme_lim.c**
- **vb_mme_utl.c**
- **vb_ptli.c**
- **vb_ptmi.c**
- **vb_tmr.c**
- **vb_utl.c**
- **vbsm.c**
- **vbsm.h**
- **vbsm.x**
- **vbsm_egcfg.c**
- **vbsm_ex_ms.c**
- **vbsm_hicfg.c**
- **vbsm_sbcfg.c**
- **vbsm_szcfg.c**
- **vbsm_tst.c**

6.1.3 Sample Files

The sample files added for this release are:

- **smvbbdy1.c**
- **smvbexms.c**
- **smvbptmi.c**

6.2 Files Deleted

This section lists the files deleted for this release.

6.2.1 Common Files

No common files are deleted for this release.

6.2.2 Product Files

No product files are deleted for this release.

6.2.3 Sample Files

No sample files are deleted for this release.

6.3 Files Modified

This section lists the files modified for this release.

6.3.1 Common Files

No common files are modified for this release.

6.3.2 Product Files

No product files are modified for this release.

6.3.3 Sample Files

No sample files are modified for this release.

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Open Source Software Usage

Open Source Software (OSS) components were not used during the development of LTE-MME Reference Application.

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Software Conformance to Manuals

The LTE-MME Reference Application software conforms to the following documentation:

Note: These documents are released with version 1.1 of the LTE-MME Reference Application software. Check Trillium's Customer Support Website for any document addenda.

1091417 – *LTE-MME Reference Application Functional Specification*

Table 8-1: Functional Specification changes

Version	Date	Author	Description
1.1	June 06, 2010	Raja Kumar DT	Initial release. Conforms to MME Reference Application software release, version 1.1

1092417 – *LTE-MME Reference Application Service Definition*

Table 8-2: Service Definition changes

Version	Date	Author	Description
1.1	June 10, 2010	Raja Kumar DT	Initial release. Conforms to MME Reference Application software release version 1.1

1222413- *LTE eNodeB User Guide*

Table 8-3: Service Definition changes

Version	Date	Author	Description
1.2	June 17, 2010	Ashish Dobhal	Updated document for segregated CNEs and added Product Feature Flags for MME Reference Application.

1111001 – *System Services Interface Service Definition*

Table 8-4: System Services Interface Service Definition changes

Version	Date	Author	Description
1.6	March 24, 1998	ada	Added **`SAddMsgRef`** system service