GSM 10.71 V7.0.0 (1999-08)

Technical Report

Digital cellular telecommunications system (Phase 2+); Project scheduling and open issues: Location services (LCS) (GSM 10.71 version 7.0.0 Release 1998)

Available SMG only

GLOBAL SYSTEM FOR
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ETSI

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Contents

Foreword

This ETSI Technical Report (TR) has been produced by the Special Mobile Group (SMG) of the European Telecommunications Standards Institute (ETSI).

This TR describes the project management aspects of LCS standardization. Location Services (LCS) standardization is being pursued within the T1P1.5 LCS Sub-Working Group (SWG) under the sub-technical committee of T1P1, of the ANSI accredited T1 technical committee. By enabling the positioning of handsets, LCS allows for service providers to offer location based services

This document is a 'living document' and may be frequently updated by the LCS SWG and may change following formal SMG approval. Should SMG modify the contents of this TR it will then be republished by ETSI with an identifying change of release date and an increase in version number as follows:

Version 7.x.y

where:

7   indicates release 1998 of GSM Phase 2+;

x   the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.

y   the third digit is incremented when editorial only changes have been incorporated in the specification.

1   Scope

This document describes the project management aspects of LCS standardization. Thus, it covers the scope of the work, the project plan, the time schedules, deliverables, open issues, high level guidelines and technical decisions.

Location Services (LCS) standardization is being pursued within the T1P1.5 LCS Sub-Working Group (SWG) under the sub-technical committee of T1P1, of the ANSI accredited T1 technical committee. By enabling the positioning of handsets, LCS allows for service providers to offer location based services which:

- May provide public services, which may or may not be mandated, and / or

- May be deployed for commercial purposes, and / or

- May be deployed to enhance the operational capabilities of service providers / operators

This document is a 'living document' and may be frequently updated by the LCS SWG. The LCS phase 1 specifications rapporteur should make sure that this document reflects the latest status of the ongoing work.
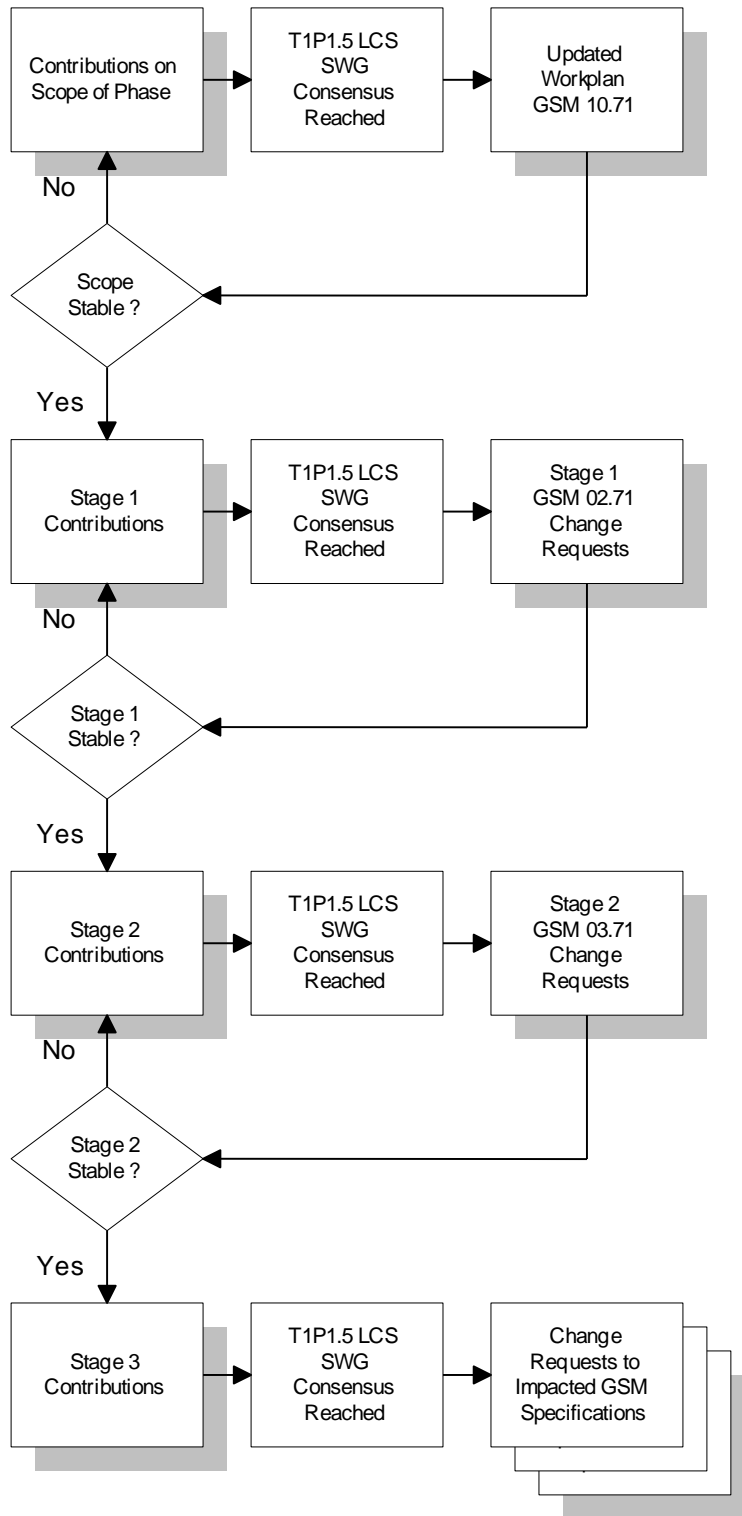
1.1   References

[1]	LS from GSM NA requesting TOA etc.
[2]	Federal communications commission (FCC): "Memorandum Opinion and Order 97-402".
[3]	LS from SMG1 requesting OTD and GPS
[4]	GSM 02.71: "Digital cellular telecommunication system; Stage 1 Service Description of LCS phase 1".
[5]	GSM 03.71: "Digital cellular telecommunication system; Stage 2 Functional Description of LCS phase 1"
[6	CCITT Recommendation I.130: "General modelling methods – Method for the characterisation of telecommunication services supported by an ISDN and network capabilities of an ISDN".
[7]	T1P1.5/99-239 Liaison from T1P1.5 to SMG12 on LCS Architecture.
[8]	T1P1.5/99-295 Liaison from T1P1.5 to SMG12, TSG_SA_WG1 on LCS Phase 1 Architecture Principles, April 30, 1999.
[9]	T1P1.5/99-365 Liaison from T1P1.5 to SMG12 on LCS Phase 2 Architectural Considerations.

2   General Considerations

Location services are complex and time critical. Consequently, it is important that the effective traditional standardization process is carefully followed to ensure standards are developed which meet the diverse requirements of the various possible location based services in a timely manner. Consideration is also provided for compatibility of the LCS specifications with other GSM specifications, and where applicable compatibility and interoperability with national or local safety networks (such as for example, the North American Public Safety networks).

The Location Services standards will be developed, and evolve, using a procedure that is consistent with that described in CCITT I.130 [6] for the characterization of telecommunication services. As such, due process is provided regarding the Schedule and Scope of each Phase, Stage 1, Stage 2, and Stage 3 specifications (see also [8]).

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│Contributions│      │  T1P1.5 LCS │      │   Updated   │
│  on Scope   │ ───► │     SWG     │ ───► │  Workplan   │
│  of Phase   │      │  Consensus  │      │  GSM 10.71  │
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│   Stage 1   │      │  T1P1.5 LCS │      │   Stage 1   │
│Contributions│ ───► │     SWG     │ ───► │  GSM 02.71  │
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│   Stage 2   │      │  T1P1.5 LCS │      │   Stage 2   │
│Contributions│ ───► │     SWG     │ ───► │  GSM 03.71  │
│             │      │  Consensus  │      │   Change    │
│             │      │   Reached   │      │  Requests   │
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│   Stage 3   │      │  T1P1.5 LCS │      │   Change    │
│Contributions│ ───► │     SWG     │ ───► │ Requests to │
│             │      │  Consensus  │      │ Impacted GSM│
│             │      │   Reached   │      │Specifications│
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LCS Standards Development Process

3   Phases

Location Services are being developed, and will evolve, using a phased approach. Due to time constraints, not all desired work items can be completed at once. Therefore a prioritized approach is being followed which delivers the most critical work items as quickly as possible.

Information relative to key decisions and time schedules for the phases of LCS are provided in the following subclauses.

3.1   Phase 1

3.1.1   Contents

In accordance with the LS (liaison statement) from GSM NA to T1P1 (September 14, 1998) [1], T1P1 decided in the Red Bank meeting (September 17, 1998) to standardize the Time Of Arrival (TOA) positioning method to meet the North American (NA) regulatory requirements, see FCC 97-402 [2]. (The location of a MS initiating an emergency call shall be given within the accuracy of 125 meters or better).

T1P1 also decided that the architecture to be standardized in conjunction with TOA shall be generic and flexible to support the standardization of additional methods in later phases.

The following architectural principles were agreed upon within the LCS SWG for LCS Phase 1 [8]:

1   A Single Flexible Generic Architecture Supporting All Positioning Technologies

A single flexible generic architecture shall be standardized which supports all positioning technologies under consideration (i.e. including, but not limited to, UL-TOA, E-OTD, GPS, and Cell Id and Timing Advance).

Note: Carriers may provide Location Services using one or more positioning technologies, and may deploy various technologies in a phased approach (i.e. deploying first one technology and then at a later time, additional technologies). From the development and deployment perspective, a single generic architecture, realistically and practically, best meets the needs of Equipment Vendors, Carriers and Subscribers.

2   Open Standardized Interfaces

The LCS Architecture shall provide open standardized interfaces.

Note: The network architecture will facilitate multi-vendor solutions and equipment interoperability.

3.1.2   Time schedules

In accordance with the GSM NA LS (Sept. 14, 1998), T1P1 has agreed to complete phase 1 standardization in the timeframe of GSM release 1998, and to submit the LCS phase 1 specifications:

-      for information at SMG#28 plenary (Milan, Feb. 8-12, 1999); and

-      for approval at SMG#29 plenary (Miami, Jun. 23-25, 1999).

The list of specifications and change requests (CRs) that are relevant for LCS phase 1 to be approved for GSM Release 1998 are given in the subsequent Deliverables section of this document.

3.1.3   Open issues

There are no open issues for LCS Phase 1.

3.2   Phase 2

3.2.1   Contents

In accordance with the LS (liaison statement) from SMG1 (Nov. 2, 1998) [3], T1P1 decided in the Clearwater meeting (Dec. 15, 1998) to standardize the Observed Time Difference (OTD) and Global Positioning System (GPS) positioning methods as the phase 2 to meet the global (SMG) requirements for LCS.

The enhancements made in LCS Phase 2 should be backwards compatible with the existing LCS Phase 1 architecture [7].

As in LCS Phase 1, the architecture of LCS Phase 2 will provide a single generic flexible architecture capable of supporting all positioning methods under consideration, and shall provide open interfaces (especially for the LMU, SMLC and GMLC) [9]. This applies to the MS interface as well.

At the May 17-21, 1999 Banff T1P1.5 LCS SWG meeting, agreement was reached to pursue a unified NSS / BSS architecture (as described in T1P1.5/99-344) for LCS Phase 2.

3.2.2   Time schedules

As decided in the Savannah meeting (April 26-30) phase 2 will be completed and approval sought at SMG#30 plenary (November 8th, 1999)as part of GSM Release 98.

3.2.3   Open issues

Unified Architecture open issues include the following:

- Registration of LMUs in the PRCF (SMLC or BSC)

- Use of MAP versus BSSMAP on the Ls and Lv interfaces

- Use of DTAP versus RR signalling on the Um interface

- Support of permanent SDCCH to an LMU with BSS based positioning

- OMC for SMLC

- Support for GPRS

3.3   Phase 3

3.3.1   Contents

During the drafting of LCS phase 1 several features and technical solutions have been identified as useful for potential value added services. The tight time scales of LCS Phases 1 and 2 do not sufficiently allow for the investigation and standardization of the possible enhancements needed for the provision of services requiring capabilities beyond those provided in phases 1 and 2, and as such these will be further addressed in phase 3.

It is also planned for LCS phase 3 to consider:

- GPRS;

- CAMEL (interactions with LCS to support enhanced location info for IN-services)

3.3.2   Time schedules

LCS phase 3 work will start when LCS phases 1 and 2 are completed.

3.3.3 Open issues

The following open issues have been identified for LCS phase 3:

- The need to consider UMTS aspects in LCS phase 3 (decisions) including ARIB service requirements for UMTS as requested by S1 (TSG_SA_WG1) in a LS, see T1P1.5/99-202.

4 Interfaces with Other Standards Development Organizations

4.1 ETSI TC-SMG

In accordance with the agreements between SMG and T1P1, T1P1 has the lead on Location services standardization for the GSM family (PCS1900, GSM900 and GSM1800).

Close working contact with SMG should be maintained to assure compatibility of LCS with other GSM services and protocols. This will be done by the appointed LCS rapporteurs who are as follows:

- SMG1 (Service aspects): Anna Sillanpaa, Nokia Americas

- SMG2 (Radio aspects): John Hasting, Motorola

- SMG3 (Network aspects): Stephen Edge, Siemens, and Sonia Doshi, Nortel Networks

- SMG6 (O&M aspects): Albert Yuhan, Omnipoint

- SMG10 (Security aspects): Timo Rantalainen, Nokia

- SMG12 (Architecture aspects): Toni Johansson, Ericsson

It is the responsibility of these rapporteurs to make sure that these STCs are aware of the progress and decisions made regarding LCS standardization. In particular, they are responsible for presenting the decisions and draft specifications and change requests (CRs) for review or endorsement, as applicable, to the STCs as soon as possible when these documents reach a stable state.

In practise, to enable the inclusion of the LCS specifications into GSM release '98 (or later releases as applicable), it is very important that the rapporteurs create and maintain close contact with the relevant SMG STC chairs and STF12 (PT12) expert. For example, the time scales, needed participation in their meetings, approval process etc. should be discussed with these persons continuously until the GTSs and CRs are approved in an SMG plenary. Note, the LCS CRs against GTSs that are under a SMG STC will be presented for approval by the SMG STC chair, and so, it is important that we have his or her full approval as well as that of the SMG STC.

The rapporteurs are to report in all meetings what has been discussed and agreed with the SMG STCs. This is to make sure that the close communication is started and maintained with these groups.

T1P1.5 decisions should be specifically conveyed to SMG STCs by liaison statements or by other material as agreed in the T1P1.5 LCS SWG.

In addition, joint meetings should be held as needed with the SMG STCs.

4.2 TR45.2

Close working contact with TR45.2 AHES (Ad Hoc on Emergency Services) ad hoc group should be maintained to assure compatibility of LCS services and protocols with the relevant Public Safety Answering Point (PSAP) specifications. This will be done by the appointed LCS rapporteur, Brye Bonner, Motorola. She is responsible for presenting the draft specifications, and in particular the aspects related to the GSM PLMN and PSAP interface, as soon as possible when the decisions are made and the relevant documents reach a stable state.

The TR45.2 specifications define the protocol for the interface between GSM PLMN and public safety networks, and the relevant services and architectures from the public safety network perspective. T1P1 is providing the TR45.2 AHES group with document T1P1.5/99-167: Proposed Additions to PN-3890 for PCS1900, for which Stephen Edge (Siemens) is serving as the editor.

Additionally, it is the intent of T1P1 to similarly provide input to TR45.2 for PN-4288, which addresses location services other than Emergency Services.

In addition, joint meetings should be held as needed with the TR45.2 AHES group.

5   Support Tools

T1 Server (www.t1.org/t1p1/t1p1.htm): provides access to T1P1.5 meeting reports, input and all output documents.

Email distribution list: t1p15lcs@t1.org (Subscription according to the T1P1 procedures)

6   LCS Requirements

6.1   Service Requirements

The standardization of location based services will provide sufficient network enabling functionality to meet the requirements of nationally or locally mandated Emergency Services (where applicable),as well as to meet the requirements of value added and / or service provider specific location based service requirements for the GSM family.

The service requirements for LCS are provided in the GSM 02.71 Stage 1 Service Description specification.

6.2   Charging requirements

Charging requirements are for further study.

7   Deliverables

7.1   LCS Phase 1 Deliverables

7.1.1   Stage 1 (service description)

	Title: Digital cellular telecommunications system (Phase 2+); Location Services (LCS); Service description, Stage 1	Provisional approval requested in T1P1.5	Provisional approval in T1P1.5	Presented for information for SMG plenary	Approval in SMG plenary	Responsible STC
T1P1.5/99 -061rx/ GTS 02.71	Editor/Company Mr. Randolph Wohlert, Pacific Bell Wireless	target: Jan. 21, 1999	target:	target: SMG#28	target: SMG#29	SMG1 (review)

7.1.2   Stage 2 (functional description)

	Title: Digital cellular telecommunications system (Phase 2+); Location Services (LCS); **(Functional description) - Stage 2**	Provisional approval requested in T1P1.5	Provisional approval in T1P1.5	Presented for information for SMG plenary	Approval in SMG plenary	Responsible STC
T1P1.5/99-048r0/ GTS 03.71	Editor/Company Ms. Sonia Doshi, Nortel Networks	target: Feb. 5, 1999	target:	target: SMG#28	target: SMG#29	SMG2, SMG3, SMG10, SMG12 (review/for info)

7.1.3   Stage 3 (protocol description)

LCS stage 3 description comprises a new GTS:

	Title: Digital cellular telecommunications system (Phase 2+); **Mobile radio interface layer 3 location services specification; (GSM 04.71)**	Provisional approval requested in T1P1.5	Provisional approval in T1P1.5	Presented for information for SMG plenary	Approval in SMG plenary	Responsible STC
T1P1.5/99-027/ GTS 04.71	Editor/Company Mr. Ville Ruutu, Timo Rantalainen, Veli-Matti Teittinen, Nokia	target: Feb. 5, 1999	target:	target: SMG#28	target: SMG#29	N/A

	Title: Digital cellular telecommunications system (Phase 2+); **Location services; Serving Mobile Location Centre – Base Station System (SMLC –BSS) interface Layer 3 specification**	Provisional approval requested in T1P1.5	Provisional approval in T1P1.5	Presented for information for SMG plenary	Approval in SMG plenary	Responsible STC
T1P1.5/99-304/ GTS 08.71	Editor Mr. Bikash Saha, Ari Kangas	target: June 10, 1999	target:	target: SMG#28 (as part of CR against 08.08)	target: SMG#29	N/A

LCS stage 3 description comprises CRs (defining updates to the existing GTSs):

	Title: **Abbreviations**	Provisional approval requested in T1P1.5	Provisional approval in T1P1.5	Presented for information for SMG plenary	Approval in SMG plenary	Responsible STC
T1P1.5/99-019/ GTS 01.04	Editor/Company Mr. Stephen Edge, Siemens	target: Feb. 5, 1999	target:	target: SMG#28	target: SMG#29	

	Title: **Architecture**	Provisional approval requested in T1P1.5	Provisional approval in T1P1.5	Presented for information for SMG plenary	Approval in SMG plenary	Responsible STC
T1P1.5/99-020/ GTS 03.02	Editor/Company Ms. Sonia Doshi, Nortel Networks	target: Feb. 5, 1999	target:	target: SMG#28	target: SMG#29	SMG12

	Title: **Restoration procedures**	Provisional approval requested in T1P1.5	Provisional approval in T1P1.5	Presented for information for SMG plenary	Approval in SMG plenary	Responsible STC
T1P1.5/99-022/ GTS 03.07	Editor/Company Mr. Stephen Edge, Siemens	target: Feb. 5, 1999	target:	target: SMG#28	target: SMG#29	SMG3 WPC

	Title: Organization of subscriber data	Provisional approval requested in T1P1.5	Provisional approval in T1P1.5	Presented for information for SMG plenary	Approval in SMG plenary	Responsible STC
T1P1.5/99-023/ GTS 03.08	Editor/Company Mr. Stephen Edge, Siemens	target: Feb. 5, 1999	target:	target: SMG#28	target: SMG#29	SMG3 WPC

	Title: Subscriber data management	Provisional approval requested in T1P1.5	Provisional approval in T1P1.5	Presented for information for SMG plenary	Approval in SMG plenary	Responsible STC
T1P1.5/99-025/ GTS 03.16	Editor/Company Mr. Stephen Edge, Siemens	target: Feb. 5, 1999	target:	target: SMG#28	target: SMG#29	SMG3 WPC

	Title: Universial Geographic Area Description	Provisional approval requested in T1P1.5	Provisional approval in T1P1.5	Presented for information for SMG plenary	Approval in SMG plenary	Responsible STC
T1P1.5/99-181/ GTS 03.32	Editor/Company Mr. Andrew Pickford, CPS	target: June 11, 1999	target:	target: SMG#28	target: SMG#29	SMG12

	Title: Layer 3 General Aspects	Provisional approval requested in T1P1.5	Provisional approval in T1P1.5	Presented for information for SMG plenary	Approval in SMG plenary	Responsible STC
T1P1.5/99-028/ GTS 04.07	Editor/Company Ms. Toni Johansson , Ericsson	target: Feb. 5, 1999	target:	target: SMG#28	target: SMG#29	SMG3 WPA

	Title: Mobile radio i/f (Layer 3)	Provisional approval requested in T1P1.5	Provisional approval in T1P1.5	Presented for information for SMG plenary	Approval in SMG plenary	Responsible STC
T1P1.5/99-029/ GTS 04.08	Editor/Company Mr. Bikash Saha, Ericsson	target: Feb. 5, 1999	target:	target: SMG#28	target: SMG#29	SMG2 WPA, SMG3 WPA

	Title: Mobile radio i/f (Layer 3)	Provisional approval requested in T1P1.5	Provisional approval in T1P1.5	Presented for information for SMG plenary	Approval in SMG plenary	Responsible STC
T1P1.5/99-031/ GTS 05.05	Editor/Company Mr. Bikash Saha, Ericsson	target: Feb. 5, 1999	target:	target: SMG#28	target: SMG#29	SMG2 WPB

	Title: **A i/f**	Provisional approval requested in T1P1.5	Provisional approval in T1P1.5	Presented for information for SMG plenary	Approval in SMG plenary	Responsible STC
T1P1.5/99-033/ GTS 08.08	Editor/Company Mr. Bikash Saha, Ericsson	target: Feb. 5, 1999	target:	target: SMG#28	target: SMG#29	SMG2 WPA

	Title: **MAP**	Provisional approval requested in T1P1.5	Provisional approval in T1P1.5	Presented for information for SMG plenary	Approval in SMG plenary	Responsible STC
T1P1.5/99-035/ GTS 09.02	Editor/Company Mr. Stephen Edge, Siemens	target: Feb. 5, 1999	target:	target: SMG#28	target: SMG#29	SMG3 WPC

	Title: **BSSAP (E i/f)**	Provisional approval requested in T1P1.5	Provisional approval in T1P1.5	Presented for information for SMG plenary	Approval in SMG plenary	Responsible STC
T1P1.5/99-035/ GTS 09.08	Editor/Company Mr. Stephen Edge, Siemens	target: Feb. 5, 1999	target:	target: SMG#28	target: SMG#29	SMG3 WPC (?)

7.2   LCS Phase 2 Deliverables

TBD : Change Requests to LCS Phase 1 Specifications and other existing GSM specifications.

7.3 LCS Phase 3 Deliverables

TBD: Change Requests to LCS Phase 2 Specifications and other existing GSM specifications.

8 Liaison activity plan

7.1 TC-SMG and SMG STCs As the LCS GTSs and CRs are either related to or against GTSs which are under the responsibility of the SMG STCs these CRs are to be provided for these SMG STCs for their information (and comments) or endorsement.

It is the responsibility of the appointed SMG STC specific rapporteurs to:

- Discuss with the SMG STC chair(s) and STF12 support person these plans and time scales to make sure the plan is acceptable and that the needed preparations and actions are done; and

- Prepare the LSs to be sent in conjunction with the GTSs and CRs and prepare them for LCS SWG to be approved by T1P1.5, and to make sure that additional T1P1.5 meetings are organized as needed. See section 6 for the meeting calendar for interim LCS SWG and T1P1.5 (LCS) meetings. A T1P1.5 meeting is needed to send LSs.

Endorsement:

Note, the schedules below are planned taking into account the meeting schedules of the SMG STCs and their WP meetings.

1. SMG

- For February 8-12 (SMG#28): For information: All above mentioned GTSs and CRs and this work plan (GTS 10.71) - material sent from T1P1.5 meeting Feb. 5 (Chicago)

- For June 21-25 (SMG#29): For approval: All above mentioned GTSs and CRs and this work plan (GTS 10.71) – material sent from meeting??

2. SMG2 WPA

- From SMG#28 for information - material sent from T1P1.5 meeting Feb. 5 (Chicago)
  - T1P1.5/99-029/ GTS 04.08
  - T1P1.5/99-033/ GTS 08.08

- For March 15-19 meeting for endorsement – additional T1P1.5 meeting needed?? (See clause 6)
  - T1P1.5/99-029/ GTS 04.08
  - T1P1.5/99-033/ GTS 08.08

3. SMG2 WPB

- From SMG#28 for information - material sent from T1P1.5 meeting Feb. 5 (Chicago)
  - T1P1.5/99-031/ GTS 05.05
  - T1P1.5/99-032/ GTS 05.10

- For April 12-16 meeting for endorsement – material sent from T1P1.5 meeting March 25
  - T1P1.5/99-031/ GTS 05.05
  - T1P1.5/99-032/ GTS 05.10

4. SMG3

- For information material sent from T1P1.5 meeting Feb. 5
  - T1P1.5/99-021/ GTS 03.03
  - T1P1.5/99-027/ GTS 04.71

- For April 12-16 meeting for endorsement – material sent from T1P1.5 meeting March 25

- T1P1.5/99-021/ GTS 03.03
- T1P1.5/99-027/ GTS 04.71

5. SMG3 WPA

- For information through emailing – material sent from T1P1.5 meeting Feb. 5
  - T1P1.5/99-028/GTS 04.07
  - T1P1.5/99-029/ GTS 04.08

- Endorsement through emailing in April timeframes (details to be discussed with the SMG3 WPC chair)
  - T1P1.5/99-028/GTS 04.07
  - T1P1.5/99-029/ GTS 04.08

6. SMG3 WPC

- For information through emailing – material sent from T1P1.5 meeting Feb. 5
  - T1P1.5/99-022/ GTS 03.07
  - T1P1.5/99-023/ GTS 03.08
  - T1P1.5/99-025/ GTS 03.16
  - T1P1.5/99-035/ GTS 09.02
  - T1P1.5/99-035/GTS 09.08

- April 22-26 for endorsement – material sent from T1P1.5 meeting March 25
  - T1P1.5/99-022/ GTS 03.07
  - T1P1.5/99-023/ GTS 03.08
  - T1P1.5/99-025/ GTS 03.16
  -
  - T1P1.5/99-035/ GTS 09.02
  - T1P1.5/99-035/GTS 09.08

7. SMG12

- Meeting?? To be discussed with the chair.

  - T1P1.5/99-020/GTS 03.02
  - T1P1.5/99-021/ GTS 03.03

For information (and comments):

1. SMG1:

- Through emailing for information: Stage 0, stage 1 – material sent from T1P1.5 meeting Feb. 5

- (Plenary in March 8-12 if needed)

2. SMG2

- Through emailing – material sent from T1P1.5 meeting Feb. 5

  - T1P1.5/99-029/ GTS 04.08
  - T1P1.5/99-031/ GTS 05.05
  - T1P1.5/99-032/ GTS 05.10
  - T1P1.5/99-033/ GTS 08.08

- April 16-20 meeting – material sent from T1P1.5 meeting ?

  - T1P1.5/99-029/ GTS 04.08
  - T1P1.5/99-031/ GTS 05.05

- T1P1.5/99-032/ GTS 05.10
- T1P1.5/99-033/ GTS 08.08

3. SMG3

- Through emailing – material sent from T1P1.5 meeting Feb. 5

  - T1P1.5/99-022/ GTS 03.07
  - T1P1.5/99-023/ GTS 03.08
  - T1P1.5/99-025/ GTS 03.16
  -
  - T1P1.5/99-028/GTS 04.07
  - T1P1.5/99-029/ GTS 04.08
  - T1P1.5/99-035/ GTS 09.02
  - T1P1.5/99-035/GTS 09.08

- Through emailing in April timeframes (details to be discussed with the SMG3 chair)

  - T1P1.5/99-022/ GTS 03.07
  - T1P1.5/99-023/ GTS 03.08
  - T1P1.5/99-025/ GTS 03.16
  -
  - T1P1.5/99-028/GTS 04.07
  - T1P1.5/99-029/ GTS 04.08
  - T1P1.5/99-035/ GTS 09.02
  - T1P1.5/99-035/GTS 09.08

8.2   TR45.2 AHES

In order to make sure that the LCS specifications are compatible with the LCS specifications, the LCS GTSs and CRs should be sent for information to TR.45 ESAH.

The TR45.2 ESAH drafting of the PN4288 is scheduled to be completed 3Q-4Q/99.

9   T1P1.5 LCS SWG meeting calendar

The following LCS SWG meetings are scheduled as part of the T1P1 work planning:

- March 22-24

- May 17-19

- July 19-21

Approved (additional) interim LCS SWG meetings:

- T1P1.5 LCS SWG, February 1-5, 1999, Chicago

Additional proposed LCS SWG meetings:

- End of Feb.8-12

- April 26-30

- June?

These meetings are proposed in order to address the concerns that the different SMG STCs rise in a timely manner. It is important that these meetings take place, if needed, to make sure that the needed processing is LCS specification are approved, if possible, at SMG#29 (June, 1999). In addiiton, these meetings are needed to address the LCS phase 3 issues.

Additional T1P1.5 meetings to be needed:

Need depending on comments received for LCS phase 1 GTS(s) and/or CR(s), i.e. if changes are done the updated GTS(s) and/or CR(s) need to be sent for the SMG STCs (as responsibilities given above). For this purpose, additional T1P1.5 meetings are needed to approve the submission of the LCS specifications and the accompanying LSs.

Annex A:
Document change history

Document history			
0.0.0	Jan. 17, 1999	Nokia (Maui meeting)	
0.0.1	Jan. 20, 1999	Nokia (Maui meeting)	
0.0.2	Jan. 31, 1999	Nokia (Chicago meeting)	
1.0.0	Feb. 4, 1999	Nokia (Chicago meeting)	
2.0.0	Jun. 10, 1999	Nokia (Cambridge meeting)	

History

Document history		
V7.0.0	July 1999	Unpublished