

GUST

Galileo User Support Transport

5th OREGIN Plenary Meeting

December 1st, 2000

Brussels



Introducing GUST

The GUST Project

- A project of the European Commission (DG IST)
- Starting Jan. 2000, ending June 2001

Main Goals

- To characterise the future Galileo-based GNSS2 user terminal, using the 2008 users needs as the main basis
An application, market-oriented approach
- To support the EC in the field of satellite navigation user terminals



The GUST Team



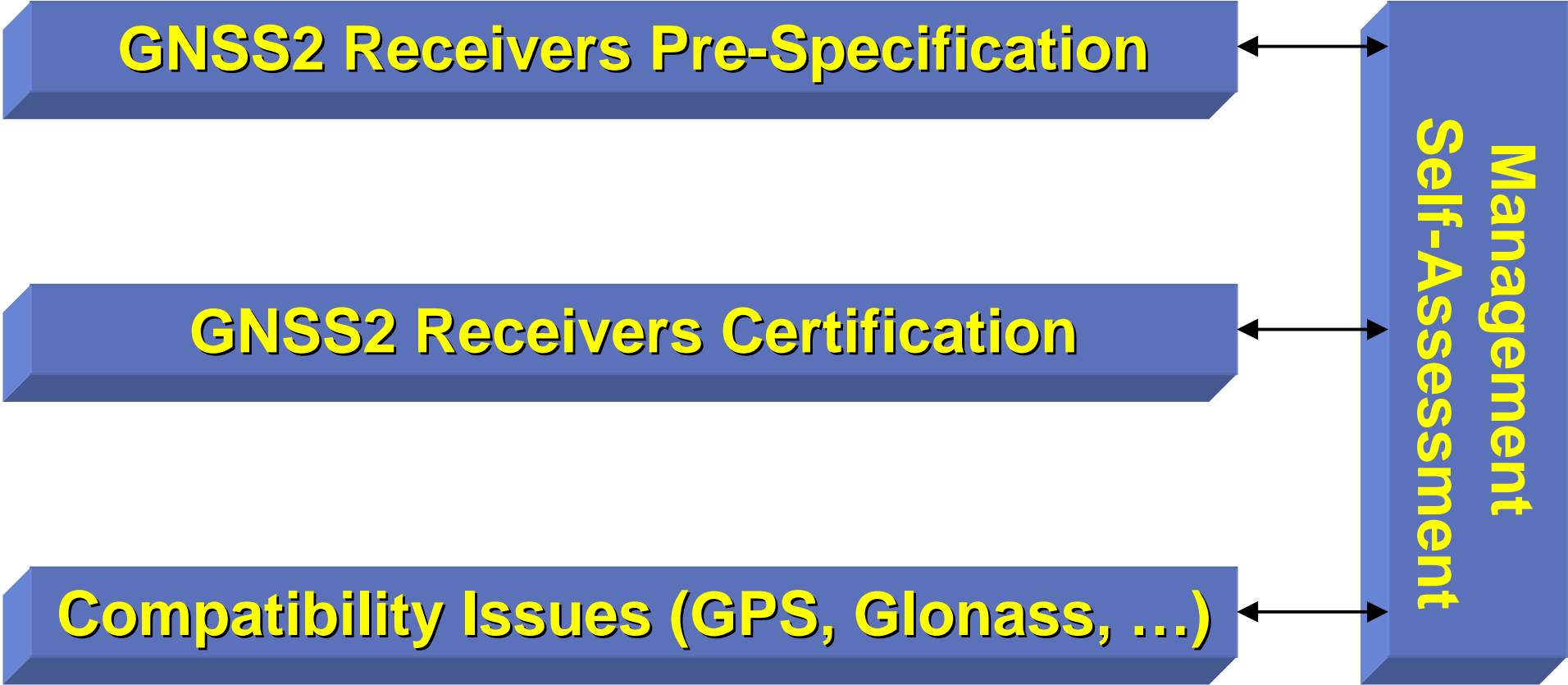
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Work Breakdown



WP1000 - Preliminary Specification (1/2)

- **Objective:** To draw up a preliminary generic specification of future Galileo-based GNSS2 user terminal (2008 market)

- **Starting point:**
 - User needs & applications definition (GALA WP1 - 47 “high priority” out of 92):
 - ◆ safety of life & security
 - ◆ professional market
 - ◆ mass market
 - ◆ aerospace
 - ◆ maritime
 - ◆ land
 - Receiver design drivers:
 - ◆ stand alone / integrated
 - ◆ power consumption
 - ◆ cost
 - ◆ communication capability (incl. SAR)
 - ◆ certification requirement
 - ◆ hybridisation need



WP1000 - Preliminary Specification (2/2)

- **GUST user terminal classification (on going)**
 - Accuracy-driven professional market, AI2 & RT services, integrated, no. comm, uncertified
 - Integrity-driven safety of life market, HI service, integrated, hybridised, certified
 - Handheld mass market, PVT service stand-alone, low consumption, low cost
 - Navigation & Guidance professional/mass market, PVT & AI1 integrated, hybridised, no comm.
 - Supervision/Surveillance/Tracking professional market, PVT & AI1 communication link / SAR
- **Outline of the pre-specifications:**
 - Functional features: terminal functions, operating modes, IO interfaces, ...
 - Physical features: HW implementation, power, size/weight, physical interfaces
 - Operational constraints: environmental, maintainability, packaging, training, ...



WP2000 - The Certification Issue (1/2)

- **Objectives:**

- To draw up the essential guidelines for certification of Galileo-based GNSS2 user terminal

- To assess the impact on the user terminal itself

- **Starting point:**

- Future applications & related emerging needs for certification



WP2000 - The Certification Issue (2/2)

■ GUST certification types

- Safety of life
- Public & governmental interest
- Commercial

■ Selected representative applications

- aviation
- train control
- search & rescue (SAR)
- road tolling
- marine (dynamic positioning vessel)

■ For each application:

- Definition of the certification issue
- Identification of the key players:
 - ◆ receiver & final product manufacturers
 - ◆ certification authority
 - ◆ regulation authority / service provider
 - ◆ end user

■ Identification of critical paths, Recommendations



WP3000 - Compatibility with GPS, Glonass, etc.

■ Objectives:

To provide the EC with technical support & expertise (TF)

To focus on specific technical issues having strong impact on the user terminal

■ Specific studies:

- US patents
- C band
- DME mitigation processing
- Combined lower L-band (L5/E5) Galileo/GPS processing
- Revenue mechanisms (billing)
- Square pulses vs. shaped pulses



WP1000 Validation Workshop (Pre-specification)

- **Aim:** To present and validate GUST results on user terminals preliminary specification

- **Who is invited to attend ?**
Manufacturers, users and service providers

- **Where and when ?**
A one day workshop in Brussels
on February 2001 (week 6, date TBD)

- **What for ?**
 - To get the latest information related to the Galileo user segment
 - To contribute directly to final recommendations of GUST WP1000 by providing comments and suggestions



WP2000 Validation Workshop (Certification)

- **Aim:** To present and validate GUST results on future GNSS user terminals certification

- **Who is invited to attend ?**
Certification authorities, manufacturers, users and service providers

- **Where and when ?**
A one day workshop in Brussels on May 2001 (week 20, date TBD)

- **What for ?**
 - To get the latest information related to the Galileo user segment
To be informed of the certification context of GNSS2 applications
 - To contribute directly to final recommendations of GUST WP2000 by providing comments and suggestions



GUST Contact

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