

Fast Tracking and Political Issues

GNSS: Update

In the last update all signs seemed to point to a deceleration in development. However, both GPS and Glonass seem to have been fast tracked in the last few months. With Galileo, it is not so much the technical development as the political issues, both inside and outside the European Union, that are important.

by Huibert-Jan Lekkerkerk



Runway approach in Valencia using Egnos (bron: www.esa.int)



GPS block IIR-F satellite (bron: www.arikah.net)

GPS

Launches

Both Boeing and Lockheed Martin received a sum of \$49,999,000 to accelerate the development of the block III satellites, with the ultimate goal of launching the first satellite in 2011. On October 12, the second block IIR-M satellite, which was launched on September 25, became operational. The third block IIR-M satellite was launched November 17 and became operational December 13. At the moment there are five block IIR-M satellites in various stages of construction. The plan is to launch them in 2007, thereby making it possible to launch the first block IIF satellite in 2008.

30+ satellites

With the upcoming launches, the total number of satellites will be 31 (or more). At the moment research is being conducted into the effect of more than 30 operational PRN codes on existing receivers. Furthermore, satellite SVN23, which was decommissioned in 2004, is temporarily operational again on PRN code 32. The satellite broadcast for a couple of days in 2006 and will broadcast again from January 10 onwards for a specified amount of time.

Galileo

Costs and locations

At the moment negotiations are underway with the Galileo Operating Company over the

conditions of the handover of the management from the Galileo Joint Undertaking to the European GNSS Supervisory Authority. The 17 participating members have donated a total of 200 million euro to the project, even though the project is currently 400 million euro over budget. (The total budget is 1.1 billion euro).

On November 7 construction of the new ground station started in Oberpfaffenhofen (Germany). The 16 million euro complex will offer space to 100 technicians and controllers and will be paid for by the German government. The second control center is being built near Toulouse (France).

A number of member states are debating the location of the Galileo Supervisory Authority. At the moment the Czech Republic seems to be ahead, but a decision is not expected before spring 2007.

Political issues

Despite the development of their own GNSS, Beidou, China is still investing 171 million euro in Galileo. India's participation, however, will end. The main issue seems to be the involvement of China in the project. India sees an important role for itself in the development and production of GNSS receivers and has also launched its own augmentation system (GAGAN) as a counterpart to the Chinese Beidou. Meanwhile the EU transport minister, Jacques Barrot, suggests that Galileo be used for military purposes as well to reduce devel-

opment costs. The United States is becoming worried about this proposal since a number of non-EU nations including China, South Korea and Israel are participating in the project.

Glonass

Status

Three new satellites were launched on December 25. This brings the constellation to a total of 19; only 10, however, are usable at the moment. The Russian defense minister has announced that Glonass will become fully available for civilian use starting in 2007.

India

India will continue its involvement in the Glonass project. It will develop the boosters for launching the Glonass-M and will also participate in the development of the new Glonass-K satellites. It is said, moreover, that Russia has admitted India to the military part of Glonass.

Egnos

In November 2006 the first aircraft trials with Egnos took place in Europe. The trials were performed by a local Spanish airline during a landing at Valencia airport (Spain).

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