

# Delays and Decisions

## GNSS Update

During the last few months it was shown that operationalising or modernizing a satellite navigation system is more difficult than most of us have been led to believe by the respective governments. With the exception of EGNOS, which finally reached the operational stage, there is much news of delays and outages. Still most governments remain positive about the time schedules involved.

By Huibert-Jan Lekkerkerk



Launch of the first block IIR-M GPS satellite on 26 September 2006 (source: [www.arikah.net](http://www.arikah.net)).

### Galileo

#### Launch delay for GIOVE-B

In September it became known that the launch of GIOVE-B is delayed as a result of problems encountered during testing. The launch was postponed earlier as a result of the success of GIOVE-A. Since the successful launch of GIOVE-A meant that a quick claim on the Galileo frequencies was possible, there was no need for an early launch of GIOVE-B. The launch was then postponed to autumn 2006, but is now postponed again to spring 2007. According to a spokesman from the Galileo Joint Undertaking the delay will have no effect on the overall Galileo schedule.

#### Galileo and Korea

An agreement between the European Union and Korea was signed in September. The agreement, which was signed in Finland, will make the exchange of satellite navigation

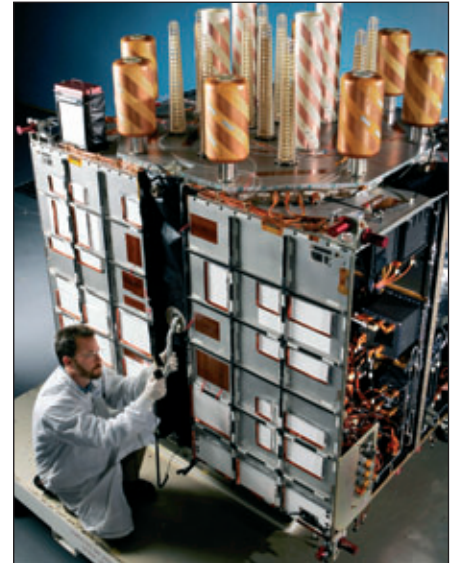
knowledge between Korea and Europe possible.

### GLONASS

The operational status of GLONASS is still precarious. In previous updates I already mentioned the limited amount of operational satellites. During September a total of six satellites became unusable. For the moment these are said to be temporarily switched off, but regarding the age of most of these satellites there is a good chance that they will stay unusable. At the moment of writing only 10 satellites out of a minimum configuration of 18 are operational.

### GPS

Even though in general the GPS satellites are lasting longer than the GLONASS satellites, they do not 'live' forever. This became clear on the 28th of August when three satellites became unhealthy at the same time. As a result users experienced configurations that were below the standards set over the last few years. A positive aspect is that more slots are now available for the newer types of satellites such as the block IIR-M type. On the 25th of September the second so-called GPS block IIR-M satellite was launched from Cape Canaveral. This is exactly a year to the day of the launch of the first block IIR-M satellite. It is believed by some that this long interval between launches shows that the GPS modernization program is already running behind schedule. However, the American government still sticks to the original scheme, but the reality of this is questioned more and more by positioning specialists. slots are now available for the newer types of satellites such as the block IIR-M type. On the 25th of September the second so-



GPS Block IIR-M satellite during construction (source: [www.lockheedmartin.com](http://www.lockheedmartin.com)).

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### EGNOS

Recently it became known that EGNOS signals are available on all three EGNOS satellites (Indian Ocean Region – West; Atlantic Ocean Region and Artemis). This should improve the coverage over Europe vastly. All satellites now broadcast the so-called MT o/2 signal which is 100 per cent compatible with the WAAS signal and can as such be used by all WAAS / EGNOS compatible receivers. The next step is for the member states to decide on whether or not switching to the so-called full open service that should guarantee full availability and reliability of the original EGNOS specification. This however is more a political than a technical issue.

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