



Interview

# A FULL SUITE OF MULTISATELLITE

## TASKING SOLUTIONS

With the SPOT, FORMOSAT-2 and KOMPSAT-2 satellites, soon to be joined by Pleiades, Spot Image is strengthening its product and service portfolio. The ability to task several satellites for a given project is a key competitive asset. Satellite Programming Manager Bernard Maybon explains what multisatellite tasking is all about and how it depends on defining the right imagery acquisition strategy.

### > Is multisatellite tasking vital to support a multisource offering?

Yes, obviously. Over the last 20 years, we have been acquiring imagery by tasking our SPOT satellites. Today, through international partnership agreements, we can access new sources of satellite data to round out our portfolio. In addition to SPOT, we now offer data from FORMOSAT-2 operated by NSPO<sup>1</sup> and KOMPSAT-2 by KARI<sup>2</sup>. And of course Pleiades is set to come on stream in the years ahead.

### > Will all these satellites give Spot Image a particularly comprehensive range of products and services?

Not only a comprehensive range, but most of all a complementary one. Combining the capabilities of different satellites is going to prove increasingly valuable. We can leverage the strengths of the SPOT, FORMOSAT-2 and KOMPSAT-2 satellites: FORMOSAT-2 is the first and only high-

resolution satellite to offer daily revisits, while KOMPSAT-2 provides excellent coverage and resolution. And Pleiades' high-resolution capabilities will enable us to further extend our range of services in the future.

### > So this is obviously a big competitive asset?

With all these complementary satellites, we are expanding our portfolio and above all improving customer service. We now have a bigger "toolbox" to meet our customers' varied application needs. And that is a key asset in a fiercely competitive market.

### > What does multisatellite tasking actually involve?

The first step before tasking anything is to listen closely to the customer. That means identifying their need and interacting with them to get a handle on their request. This is something we are well used to doing and it calls for careful analysis to ensure that a project is commercially feasible and achievable. But we now have to go one step further, since we must integrate tasking

of a palette of satellite resources into the process. In other words, when putting together our proposal we first look at the customer's request in the light of our satellite assets and their work loads. Multisatellite tasking is not something we are obliged to do, but it does give us more options to match solutions more closely to requirements.

### > Does satellite tasking call for a specific kind of organization?

We have set up a dedicated multisatellite tasking team in our programming department. This team processes programming requests from customers that explicitly require tasking of several satellites, or from our Customer Service. The Customer Service may sense that any one satellite does not offer sufficient coverage alone, due to weather constraints or because capacity is overbooked for the area of interest. In such cases, the Customer Service or sales manager contacts the multisatellite team to see how the customer proposal can be refined. The team looks at the request specifications and

1) National Space Organisation, Taiwan

2) Korean Aerospace Research Institute



optimizes programming requests, its aim being to define the best acquisition strategy to fit the customer's need, the specific features of each sensor and each satellite's work plan. In the final analysis, this means sharing acquisition tasks across sensors in the most efficient way. We exchange a lot of technical information with our partners during this evaluation phase. After analysing feasibility studies done by NSPO, KARI or in house, the team crafts the best commercial programming proposal for the customer, in the form of a single, synoptic document. It then works with the Customer Service to submit the programming proposal, study the customer's response and ask partners for additional feasibility analyses if necessary. Once we get the green light, each entity activates its satellite assets to acquire and validate the data.

**> And, as always, giving customers good advice is a key element?**

Yes, obviously. Customers expect us not only to meet their requirement, but also to gauge whether it's feasible. That means weighing up complex elements like their application need, available satellite capacity, the physical terrain

to be imaged and climate statistics, as well as the satellites' technical capabilities. Our objective is to make the programming requests we receive achievable. Our counselling role is vital, because to satisfy the customer's need we have to factor in the technical capabilities and constraints related to our satellite resources. We must make their life easier by avoiding certain traps for them. We have to guarantee they will be fully satisfied.

**> Isn't this multisatellite method a new approach to satellite tasking?**

It's a "plus feature" that can give us an edge over competitors. I think we will be receiving more and more multisatellite programming requests in the future, because a customer has a need and to meet it quickly and effectively we must leverage all our satellite resources. ■

## MULTISATELLITE TASKING CASE STUDIES

- **The Baplan Project** is a forest monitoring programme in Indonesia. The SPOT and FORMOSAT-2 satellites are supplying imagery of very cloudy areas. (Acquisitions programmed from September to December 2006).
- **Farmstar** is a precision agriculture programme providing a crop management support service. The three SPOT satellites and FORMOSAT-2 are tasked to image fields at precise stages of crop growth, on specific dates. (Multidate programme acquiring imagery from October to April).
- **Updating of France's RGE national basemap**, covering all of its territory, at the request of the French mapping and survey agency IGN. In its initial phase, this programme is using SPOT 5 and FORMOSAT-2 imagery (September 2006 to March 2007). Ultimately, it will also employ imagery from the future Pleiades constellation.
- **Mars PAC** is an EU agriculture programme to check farmers' subsidy claims using remote sensing. It uses SPOT 5 and FORMOSAT-2 for very-high-resolution imaging (recurrent programme every spring).



Source: Spot Image / EMM

**SÉBASTIEN BROCARD,  
MULTISATELLITE  
TEAM MEMBER  
"SURVEYING THE  
PROBLEM FROM ALL  
ANGLES".**

■ Previously, Sébastien Brocart only worked on tasking of SPOT satellites. Now, he has to "juggle" with different satellites, as he puts it with a smile. Sébastien works on the multisatellite tasking team, where his role is to help define image acquisition strategies. He receives and analyses customer requests, the objective being to provide the best possible solution. "I don't actually do the satellite programming, explains Sébastien. "I am the point of contact between in-house and external entities. With our partners, we consider possible solutions and their feasibility. My job is to pull all of the pieces together and manage the project as a whole." Each project demands a specific approach, which suits Sébastien, who is always eager for new experiences. "Multisatellite tasking requires you to factor in different satellite capabilities, so you have to keep adding new parameters into the mix to get the best solution. We have deadlines to keep, of course, but we give ourselves enough time to survey each problem from all angles." So, what is the key to success? "Effective sharing of information. I have to ensure that everyone involved gets the information they need to arrive at the right final decision."

► **Contact:**  
[prog.multisat@spotimage.fr](mailto:prog.multisat@spotimage.fr)