

Source: Spot Image/EMM



Corné Eloff

Station special issue

SOUTH AFRICA: A LONGSTANDING RELATIONSHIP

After almost 20 years of regular partnership with Spot Image, South Africa's CSIR Satellite Applications Centre envisages receiving SPOT 5 satellite imagery soon to herald a new chapter in this relationship. Mr Eloff spoke about this 17-year-old collaboration, the choice of SPOT 5 and how the relationship between Spot Image and the South African government will develop in the future.

— Can you explain your interest in getting SPOT 5 imagery?

Currently, the coverage of South Africa is basically done by 15-metre and 30-metre range Landsat imagery. The coverage is not sufficient to fulfil the demand for various applications. A better resolution is required in order for the CSIR to provide a better service. The demand comes from various departments, in particular for the observation of rural areas, and for land management, agriculture and urban planning. It's also important for us to do frequent monitoring of South Africa's environmental conditions within agriculture. We are a cattle-farming country and we've seen our grassland disappear through erosion and overgrazing. To manage the process, we need good continuous monitoring of critical areas to understand whether

these changes are caused by human activity or through natural occurrences such as ongoing drought.

Presently, the technical difficulties we have experienced on the Landsat series mean it is a logical choice to go with SPOT 5. It has the capacity to do the kind of coverage we need. Overall, this will definitely expand global observation opportunities in South Africa.

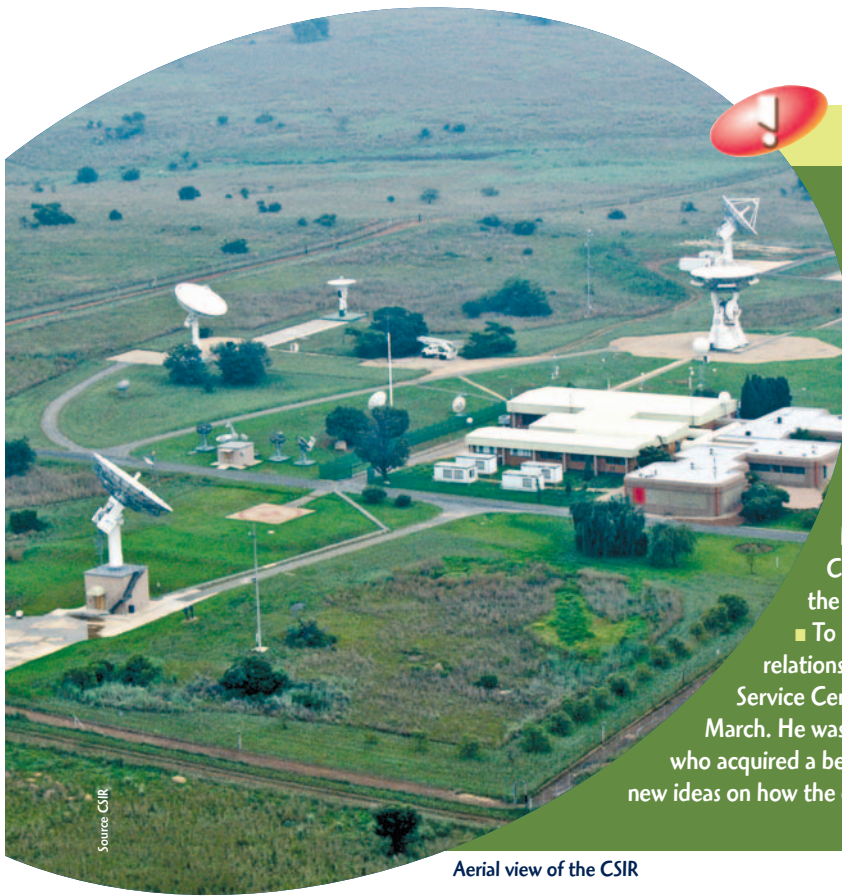
Does Spot Image also meet your requirement for technical training of your staff and transfer of technology?

The CSIR Satellite Applications Centre has had a relationship with Spot Image since 1989. We have come a long way. At the centre, we are all going into a complex engineering phase during which we will almost be reengineering its remote-sensing supply chain. A

prime responsibility for the centre is to transfer knowledge to the user community and to build internal capacity to ensure operational excellence at all times. So, it is therefore not about just the infrastructure and data processing. The re-engineering process will ensure that a better service can be provided to our valued stakeholders.

We must empower our staff and prepare ourselves to assist government in this transfer of technology. The availability of information to government has never been at the level that we envisage now. The CSIR has a responsibility to provide technology transfer to government. Our partnership with Spot Image fits the conditions for supplying this information within the proposed government licence agreement.

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THE CSIR

■ Through the CSIR Satellite Applications Centre, the Council for Scientific and Industrial Research (CSIR)—one of South Africa's main national scientific and technology research organizations—will provide SPOT satellite images as a service to support national imperatives for the South African government. The 2.5-m coverage of SPOT 5 will fulfil a new and growing demand for high-resolution remote-sensing applications from public and private sector institutions.

In a few months' time, the CSIR plans to receive direct images from SPOT 5 for government use under a new open access model.

Remote-sensing specialists, based at the CSIR Satellite Applications Centre, will manage SPOT satellite tasking to serve clients better in the South African market.

■ To settle the terms of this new contract and strengthen the longstanding relationship with Spot Image, the manager of the CSIR's Earth Observation Service Centre, Corné Eloff, visited Spot Image in Toulouse at the end of March. He was accompanied by Elsa de Beer, Sales and Customer Service manager, who acquired a better understanding of Spot Image's potential and services as well as new ideas on how the centre can improve its own applications of satellite data.

Aerial view of the CSIR



The CSIR is very grateful for this unique offer. If all goes well, this capacity building process should be in place within the next six to eight months. We are referring to the building of infrastructure for receiving SPOT 5 and for installing an advanced geoprocessing system. The reception of SPOT 5 will be operational by early July and the geoprocessing system by October this year. This will enable the CSIR Satellite Applications Centre to deliver to government any level of SPOT imagery and through its geoprocessing supply chain, ortho-corrected imagery. Once this infrastructure is there, further discussions with all the different ministries and government departments will take place to ensure that applications are created from SPOT data.

How close is the collaboration between the CSIR and the South African government, and how is it going to expand with the arrival of SPOT 5 imagery?

The Department of Science and Technology, South Africa's main ministry in terms of establishing innovation and science, sees satellite observation as one of the priority areas in our country, with a direct impact on

government projects. The CSIR Satellite Applications Centre has had a good relationship with our government for the past 20 years or more. We have direct access to the heads of departments at national level.

It is very important for us to start certain programmes called "national imperative programmes". It is our task to innovate by applying this technology in these programmes. We have to demonstrate to government how to improve a running programme by using satellite imagery, how to make it more feasible and how to get more value for money. At the moment, we invest 80 per cent of our time to empower government. A strong sensor portfolio and geoprocessing supply chain will enable the centre to contribute to the private sector as well. Mining companies and the property development market are very strong industries in South Africa. The demand from the national market for high-resolution satellite imagery is growing and expanding. Business opportunities will grow as the remote-sensing supply chain and application development improve within the centre, which will result in overall growth for the spatial market within South Africa.

How did this visit to Spot Image in France fit into this new strategy at the CSIR Satellite Applications Centre?

We foresee that the market will grow for the centre and we need to be prepared for that. It was important for us to discuss with you our expectations on specific projects and also to understand the current capacity and demand that Spot Image can handle. Our aim is to provide the South African government with the kind of service that Spot Image does in France. So it's extremely valuable for us to see at first-hand how your operations are managed. With a core remote-sensing infrastructure in place, funded by government, the centre has a huge responsibility to ensure operational excellence and knowledge transfer.

The transfer of knowledge between the centre and Spot Image and its success will create a platform from which Africa will benefit. This working model could create future opportunities into the African market. Our strategic intent for the next few months will be focused on service excellence: not just to provide images but a specialized after-sales service for its stakeholders. An advanced sensor portfolio and supply

chain will contribute towards our vision of becoming the remote-sensing custodian for South Africa.

Our long-term relationship with Spot Image is very important to us. We realised during our visit that you have strong partners; you are not a small entity. Your brand is well established with an excellent track record. For us to be associated with Spot Image as a partner will create confidence in the market.

During this week, you also became aware of the strong relationship that Spot Image has with other French and European entities, besides CNES. What new vision do you take with you and what will you report to your stakeholders?

It is very difficult for the CSIR Satellite Applications Centre to build foreign relationships with all these entities individually. It is more useful, in the eyes of our stakeholders, for us to have a strong point of contact. For instance, we work very closely with our national survey and mapping department, which is exactly the same institution as IGN in France. Through Spot Image, we had the opportunity to speak to the French experts about the methodology applied in this environment and its limitations. It is easier for us to initiate contact with these institutions to get more relevant information that can be applied to our country.

In your opinion, how could this partnership between the CSIR Satellite Applications Centre and Spot Image develop in the future?

South Africa is planning to build its own future satellite constellation, and we are not sure what we can give back to Spot Image by then. As the centre will be the ground station that will receive data, a possible scenario is that this could create new opportunities for collaboration if Spot Image becomes a specific distributor of this data. With Spot Image's extensive distributing networks globally, such a partnership would be logical to explore. By that



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Subscene of a SPOT 5 image of Pretoria, South Africa

time we might have a reciprocal give-and-take relationship.

The CSIR has experience in certain areas and technologies, in disaster management, which could be transferred over to Spot Image, and vice-versa.

I believe that at the CSIR level, we have also gained momentum on remote-sensing research. Such exchange programmes would benefit both institutions and specific funding streams could be made available for such initiatives.

Spot Image is celebrating this year the 20th anniversary of SPOT 1. Our partnership with the CSIR is one of the oldest and most continuous relationships during this period. What is the key point for you of this relationship?

At the CSIR Satellite Applications Centre, we soon realised the benefits of this relationship with Spot Image. The South African market was not fully mature to absorb remote-sensing technology within specific programmes, with the SPOT 1 project in mind. At that stage, the processing capability on computers and the high cost associated with hardware and software were critical points. Over the past two to three years, South Africa has really expanded in terms of Earth observation. We need

a strong partner to provide specific services. And this relationship of trust gives us the leverage to convince our stakeholders of our ability to manage technical risk. From our point of view, if you are related to the best, you may become the best—and we see Spot Image as one of the leading institutions worldwide in terms of global observation and application development.

I believe that the past five years and the next five years will be totally different. In the past, we did not communicate enough or discuss the opportunities as the market was not ready. Now our relationship will be stronger and we are very proud to be associated with Spot Image. This relationship means a lot to us: although we are not so big as Spot Image, we feel at home here.

South Africa is regarded as one of the leading science nations in Africa. We often lead the way for implementation of systems both in South Africa and in other African countries. We believe this will be a very good example for other African countries of what Spot Image can do. Our clients are really excited about SPOT 5 and its application opportunities. ■