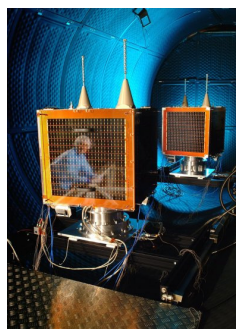


The Nigerian Space Research & Development Agency (NASRDA)

The Federal Republic of Nigeria has developed a close working relationship with SSTL, now working on their second satellite for the country.



NigeriaSat-1

It began with NigeriaSat-1, a medium-resolution imaging satellite able to photograph 600 sq kms of land in a single image. Launched in 2003, using SSTL's 100 platform, the satellite's images proved so valuable to the country's leaders, that they made the decision to replace the satellite before the end of its orbit-lift (expected to take 5-7 years).



NigeriaSat-2

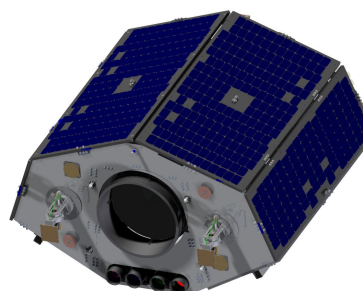
The country's Ministry of Science and Technology issued another international tender for a second, more powerful, imaging satellite to be launched in 2009. Once again, the choice was SSTL. "Working with SSTL is as close as it gets to working at home," says Francis Chizea, the Project Manager for NigeriaSat-2 and the Nigerian Government's lead official on the project. "The team here is so friendly and receptive. SSTL have been the choice for both our satellite programmes because they build them faster and better for less cost than anyone else, and we know we can rely on them to deliver on time and within budget".

Strategic partnership

After working together for seven years, Chizea says the Ministry regards SSTL as a strategic partner in their space programme. "We very much enjoy working with SSTL but we have our own ambitions," he says. "Once NigeriaSat-2 is launched, we will have had 40 engineers go through SSTL's on-site training programmes, which includes a Master of Science from the University of Surrey. They are fully trained in monitoring and maintaining our spacecraft from the ground and it has been a wonderful opportunity for them to work side-by-side with the SSTL team in England, sometimes for two years. Most importantly, they take this learning back to Nigeria and encourage innovative thinking and interest in gaining qualifications amongst their colleagues," Chizea says.

Next generation satellite

NigeriaSat-2 is what the SSTL team call a 'next generation' satellite. Built on the highly agile SSTL 300 platform, it includes a high performance camera able to photograph a minimum 40,000 km² land area per day (at least 80,000km² in perfect conditions). Chizea says the satellite should pass over Nigeria every three



days and it will photograph on every clear day. He expects to have high-resolution images covering about 95% of the country's 924,000 sq km within a year of the satellite's launch in October 2009.

Supporting decision-making

Chizea is very clear about the benefits the satellites have for all Nigerians. "The impact really has been better decision-making across the Government as a whole," he says, listing some of the uses of NigeriaSat-1 as:

- Population settlement mapping
- Flood, fire, deforestation and water resource monitoring
- Monitoring the encroachment of the Sahara Desert into the Nigerian landscape
- Observing vegetation and water patterns to pinpoint where future mosquito activity will be so they can work to prevent malaria outbreaks
- Geology mapping for mining purposes

"It's also been interesting to see how the awareness of climate change and global warming has increased in Nigeria since the public have had access to the satellite images via the media," Chizea adds. "People can see that the country is getting drier and the impact that's having on our water resources."

According to Chizea, NigeriaSat-2's benefits for the country will be even more significant. Its high-resolution images will provide farmers with precise agricultural data to show them where best to locate farms and where the most fertile areas will be in future years. Crucially, in a country such as Nigeria, where it can be difficult to collect accurate census data, it will also tell the Government the numbers of houses and sizes of settlements people are living in – enabling them to gain a true picture of population size and movements.

Global benefits

NigeriaSat-1 has already given Nigeria's President reason to feel proud – it was in the best position to photograph the aftermath of Hurricane Katrina in 2005 and the images were immediately made available, through SSTL's on-site image lab, to the US military so they could target assistance to the most needy areas.

More recently, the World Wildlife Fund used NigeriaSat-1's images of the bushfire ravaged Greek Peloponnese to understand the full extent of damage to natural animal habitats in the area. These, and other images purchased by organisations for projects other than disaster relief, also help Nigeria (and other DMC satellite owners) to offset some of their satellite costs.

Chizea also believes their satellites are beginning to play an important role in removing political boundaries in Africa. They are starting to better understand that when it comes to things like climate change, Africa needs to see itself as one, not as lots of separate countries," he says.