

## **MEDIA RELEASE**

**For immediate release**

### **I-SET and SANSA collaborate to enter WRO Robots and Space Competition**

Hartebeesthoek, 24 July 2014. The theme for the 2014 World Robotics Olympiad (WRO) is Robots and Space. For two I-SET robotics learners, Bonolo and Gopotso, from the Tersia King Learning Academy, this has been an opportunity to collaborate with the South African National Space Agency (SANSA), thanks to discussions between SANSA's Gladys Magagula and Kabelo Pheeha from I-SET, at the 2014 Scifest.



The I-SET SANSA team will be entered into Open Category in the WRO competition. Their mission is to design and create robots which will assist humankind in solving different tasks in Space.

Using the robotics kits from SANSA, the boys worked during the school holidays with a collaborated team from SANSA and I-SET to build their model. Initially, a satellite design was considered. Then, after various discussions and brainstorming with

SANSA specialists, their robots in space were designed. The first robot will operate the satellite with the infra-red sensor. The second robot will be used to transport humans doing research on Mars and the third robot will be placed next to a space station so as to determine when the space vehicle requires refueling or assistance.



*Gladys Magagula assisting the learners with their programming*

The I-SET SANSA team will be participating in the Regional WRO competition on 26 July 2014 at Tshwane University of Technology. Support and spectators are welcome to attend this all day event which starts at 08:00. Please support the learners and visit their exhibition. For details, see <http://www.handsontech.co.za/Robotics%20Comps.html>.

After the WRO competition, the model will be used by SANSA to teach learners about space and the challenges faced.

Written by Patricia Gouws and Kabelo Pheeha (I-SET)

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### **Additional information**

SANSA aims to leverage the benefits of space science and technology for socio-economic development, environmental conservation and natural resource management.

The consolidation of South Africa's primary space entities under one banner has brought together a significant range of competencies in satellite applications, satellite engineering and research in space science and technology to play an important role in the country's future space initiatives. The space agency is also committed to delivering quality services to the international space sector and growing its Earth observation data management capability.

### **SANSA Space Operations**

The SANSA Space Operations directorate, formerly the CSIR Satellite Applications Centre (SAC), is a key component in the implementation of South Africa's National Space Strategy. Ideally located at Hartebeesthoek in South Africa's Magaliesberg mountain range on the outskirts of the Cradle of Humankind World Heritage site, SANSA Space Operations provide tracking, telemetry and command (TT&C) services for geosynchronous and polar-orbiting spacecraft to the manufacturers, operators and users of satellites and launch vehicles, as well as for satellite data acquisition.

SANSA Space Operations is also involved in satellite navigation through investigations on the establishment of satellite based augmentation to existing GPS in the area. It has done a project to determine the scope of extending existing systems such as EGNOS or establishing a unique regional system for South Africa as well as a project human capital development for satellite navigation.

The vast range of satellite navigation applications, such as in mining and agriculture, environmental and disaster management, surveys mapping, Earth sciences and transportation and education, will be explored specifically for the benefit of the Southern African Development Community (SADC).