



Raytheon



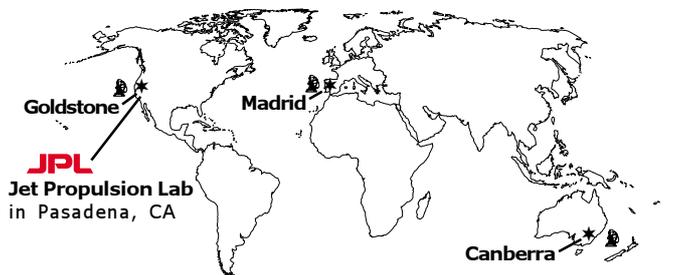
JPL

Operated by the CSIRO and Raytheon Australia, on behalf of NASA and the Jet Propulsion Laboratory

# Canberra Deep Space Communication Complex

*exploring the Solar System and beyond*

Opened in 1965, the **Canberra Deep Space Communication Complex** (CDSCC), also known as the Tidbinbilla Tracking Station, forms part of the National Aeronautics and Space Administration's (NASA's) Deep Space Network, that spans the globe. The facilities on this site are similar to the other Deep Space Network sites in Goldstone, California and outside Madrid in Spain.



**NASA's DEEP SPACE NETWORK** - three tracking stations combined to allow 24-hour communication with spacecraft



## What do you do exactly?

The CDSCC performs this essential role for NASA's Jet Propulsion Laboratory (JPL) communicating with all the interplanetary robotic spacecraft exploring our solar system.

The CDSCC acts like a post office, sending and receiving packages of information between mission specialists at JPL and the spacecraft exploring the planets, moons, and other objects throughout the Solar System.

The types of data contained in these signals can include such information as course corrections, positioning information, and scientific data and images collected by the spacecraft.



**POST OFFICE** - relaying packets of information

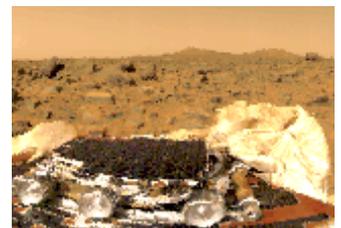


## How is that done?

To send and receive these signals, the information is converted into radio waves for transmission.

To send the signals, CDSCC uses massive radio antennas. The radio antennas use microwaves to communicate with spacecraft that may be billions of kilometres away from the Earth.

Once information is received at the Complex, it is relayed by optic fibre cable to JPL in the U.S.



**MARS** - The CDSCC relayed images from the surface of Mars

JPL then converts the signal into the images and data from the spacecraft, and then sends that to the research scientists. The information is also made available to the public through a variety of websites dedicated to each spacecraft mission.

## So, who looks after it?

The *Commonwealth Scientific and Industrial Research Organisation* (CSIRO) acts on behalf of NASA to managing their activities in Australia.

Management of the site is contracted out to the private sector. Currently the maintenance and operational services are performed by Raytheon Australia Pty Ltd.

The site employs approximately 130 full and part time staff members, all who work on the station. Their tasks range from administrative personnel, managers, logistics and stores, grounds maintenance, as well as building services and allied trades people.

The operations staff are required to work shift work to maintain communications with the spacecraft 24 hours a day, 7 days a week.