SPACESHIP
EARTH
OBSERVING OUR PLANET FROM SATELLITES

**Exhibition at City of Sydney Customs House, 23 May-20 July 2014**

## PRESS RELEASE

Buckminister Fuller's 1968 call for ‘an operating manual for Spaceship Earth' is being updated to match today's most advanced satellite imaging and remote sensing technologies.

Aerospatial technologies – first prototyped on spacecraft and in war zones and publicly highlighted in films like *Gravity* and *Avatar* – are key to an emerging goal among climate scientists to convert Fuller's 'operating manual' idea (logically a paper document in his day) to a networked computer 'system of systems' that could globally 'auto-pilot' solutions for managing our planet's environmental challenges.

Three floors of the City of Sydney's Customs House information venue at Circular Quay will display extraordinary earth observation (EO) imagery from international space agencies and satellite operators, in a three-level exhibition from 23 May to 20 July 2014. It will co-incide with the first half of Sydney's annual *Vivid* light festival and the second half of this year's Biennale of Sydney.

Called *Spaceship Earth: Observing Our Planet From Satellites*, the exhibition is being curated by an Australian founder of the International Society for Digital Earth's digital cities working party, Davina Jackson. Chairing both the ISDE cities working party and this exhibition's international advisory panel is the Queensland CEO of the Spatial Industries Business Association, Richard Simpson.

The Spaceship Earth show will promote both the Digital Earth vision (a term first coined by Al Gore in his 1992 book *Earth in the Balance*) and the Global Earth Observation System of Systems (GEOSS) project, which is being co-ordinated by the intergovernmental Group on Earth Observations (GEO) in Geneva.

The show will include videos and high-resolution stills from GEO, the European Space Agency, NASA, NOAA, the European Commission's Joint Research Centre, Geoscience Australia, NSW Land and Property Information, leading university research centres, international digital artists, and commercial providers Digital Globe and EOVision.

Guest speaker for the opening event (Thursday 22 May 7pm) is Dr Stuart Minchin, Head of Geoscience Australia's Environmental Geoscience Division, which processes satellite images on behalf of the federal government. Dr Minchin also  is Australia;s alternate Principal Delegate to the intergovernmental Group on Earth Observations (GEO). He will explain the relevance of Earth observations to our everyday lives.

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# SPACESHIP EARTH: BACKGROUND NOTES

Today's satellite mapping movement was accelerated in 2005 with the launch of Google Earth – following early commercialisation of internet systems, mobile devices and GPS navigation programs.

Called 'Earth Observations' (EO) by space scientists and 'the new space economy' by the Organization for Economic Co-operation and Development (OECD), this movement is beginning to transform human lives, job descriptions and business models everywhere. It is especially important for re-educating professionals in urban planning and design.

Satellites are not the only Earth observation vehicles contributing to the space imaging revolution: scanners also are mounted on vans and cars, low-flying aircraft, gliders, remote-controlled drones and hand-held devices which can 'photograph' heat loss from houses and how pipes run beneath the ground.

American futurist Buckminster Fuller is wrongly credited with the Spaceship Earth catchphrase.

His legendary *Operating Manual for Spaceship Earth*, published in 1968, reprised 40 years of his global logistics insights to exploit new ecological debates that were emerging while the United States raced Russia to the Moon.

Preceding Bucky's book were Kenneth Boulding's 1965 'Earth as a Space Ship' essay (in which he famously stated: In a space ship there are no sewers') and the 1966 *Spaceship Earth* manifesto by Barbara Ward (Baroness Jackson).

After them came Stewart Brand's *Whole Earth Catalog* periodical (1968-72), Charles and Ray Eames' first scale-zooming *Powers of Ten* movie (1968), and Don Dwiggins' book *Spaceship Earth: A Space Look at Our Troubled Planet* (1970).

All those modern visionaries were indebted to British philosopher Henry George, who in 1879 (at the peak of Queen Victoria's naval supremacy) described Earth as 'a well-provisioned ship, on which we sail through space.'

By the late 1960s, sailing ships and steamers were being replaced by aeroplanes and spacecraft, increasingly operated via automatic and remote electronics. Although Bucky knew about auto-piloting and other advanced technologies, he targeted his 'Operating Manual' to readers familiar with paper documents.

On 7 December 1972, one newswire photograph transcended more than a century of words about our precarious habitat floating in the universe. NASA released image AS17-148-22726, snapped by crew on Apollo 17 as it flew to the Moon.

Nicknamed 'the Blue Marble' and compared to 'a bauble suspended in endless emptiness', this was humanity's first-ever sight of the whole Earth. Along with NASA's partial 'Earthrise' photos (from Apollo 8 on Christmas Eve, 1968), it ignited today's essential sci-tech challenge: to watch from above our planet's complex systems of Nature.

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