

**Address by the Honourable Kim Beazley AC  
Governor of Western Australia**

**Opening of the Perth USAsia Centre In The Zone Conference  
The Zone Above: the Indo-Pacific Era**

**Monday, 8<sup>th</sup> October 2018**

Thank you for your warm welcome.

Firstly, I would like to acknowledge the traditional owners of the land on which we meet – the Noongar people – and pay my respects to their elders past and present.

I am delighted to see so many of you here today, especially the mix of school and university students among experts and other space industry professionals from across the region.

The subject of space has been of great interest to me for many decades including during my time as a former Minister for Defence, and more recently Australia's Ambassador to the United States of America.

My deep interest continues in my role as Western Australia's Governor, a position I am determined to use to advocate our State's unique position in the "space age" where we have or are developing critical global space infrastructure.

Space is arguably a defining realm for future human endeavor. It will no doubt change how we live and what we do on Earth.

It affects our everyday lives right around the world, underpinning everything from essential data for internet and banking systems through to complicated air and marine navigation, down to simply finding our own destinations through GPS or talking on our phones.

The critical question is how we use space in the future. The answer to that will determine global security, human safety and how we live and work.

Importantly, the investment centre of gravity related to space is shifting towards leading economies in the Indo-Pacific. As such, it is critical that we examine our shared regional challenges and opportunities to encourage the future peaceful use of space. Critical because, as was identified in a 2016 Defence White Paper, there are "new and complex non-geographic security threats in cyberspace", making space an important part of our future security environment.

This view is shared by the US think tank, the Council of Foreign Relations, which highlights the similarities in the tasks to secure both outer space and cyberspace. Its view is that the internet "increasingly depends on space-enabled communication and information services. Likewise, the operation of satellites and other space assets relies on internet-based networks".

The challenge with this scenario is that space has become contested, congested and competitive, according to analysis by the Australian Strategic Policy Institute.

- Contested, it says, because “peer adversaries such as China and Russia are developing a suite of counter-space capabilities, including co-orbital and direct ascent anti-satellite weapons”. As well, they are developing “‘soft kill’ counter-space capabilities based around electronic warfare, cyber attack and, potentially, directed-energy weapons”.
- Congested because of increasing threats from growing amounts of space debris. Importantly, Australia plays a significant role in monitoring such debris, and,
- Competitive because while opening up space to Australia, this also allows the proliferation of militarily relevant space technologies to a broader range of state and non-state actors, challenging the traditional market dominance of space powers.

Of course, Australia has had an exceptional history of involvement in the story of space for many decades. It began with our first space facility, the Woomera Rocket Range developed in 1947 in South Australia. It became the second biggest launch and tracking facility in the West.

In 1967, we launched our first satellite WRESAT from Woomera – and became the second nation outside the United States to build and launch a satellite. By 1970, Australia was home to the largest number of NASA stations outside the US.

Since those early days, we have played a central role in assisting with monitoring and control of NASA missions at other stations here in WA – at Muehea and Carnarvon, at Honeysuckle Creek and Tidbinbilla in the ACT, and at Parkes in New South Wales.

In fact, NASA’s Deep Space Network facility, the Canberra Deep Space Communication Complex at Tidbinbilla opened in 1964, is one of only three in the world and a notable example of our alliance.

Our own history, here in WA, is also remarkable. We hold a very unique position in relation to the development of critical space infrastructure because of our southern hemisphere location and longitude.

As mentioned earlier by Premier McGowan, our great geography has given us the Muehea and Carnarvon tracking stations both central to NASA space missions in the 60s. The Carnarvon station was so significant to the Gemini, Apollo and Skylab programs that NASA funded an OTC satellite communications system to improve its communications with between the station and the US.

Later, the European Space Agency developed its first deep space ground station at New Norcia in 2003, and we also host the United States Air Force space assets at Exmouth in partnership with Australian Defence.

A more recent important development has been the Murchison Radio-astronomy Observatory established by the CSIRO in 2009. Today, this 12,600 hectare site is home to the Square Kilometre Array, the world’s largest radio telescope.

The Square Kilometre Array project is co-located in South Africa and will see a collection of hundreds of thousands of ground radio antennas able to survey galaxies, allowing us to research the earliest phases of the universe. Interestingly, the pocket of land is part of the ancestral lands of the Wajarri Yamatji people, who for thousands of years before the Greeks, also observed the sky for guidance and survival.

With this new era of big data analytics comes the need for more sophisticated methods of storage and processing. To this end we are lucky to have the Pawsey Super Computing Centre located in Kensington. Its flagship supercomputer Magnus, a Cray XC40, is considered to be one of the most advanced supercomputers in the southern hemisphere.

As well, our universities offer world-class expertise in this area. The International Centre for Radio Astronomy Research is a joint venture by Curtin University and the University of Western Australia. It also happens to be playing a key role in research for the Square Kilometre Array.

I am really pleased to note, too, that this conference is being hosted by the Perth USAsia Centre in collaboration with the University of Western Australia.

Speaking of world-class research, I am enthused by a new partnership between Curtin and Lockheed Martin in developing the FireOPAL Project – a system which uses a range of sensors to track satellites and space debris. It will ultimately provide a persistent view of objects in orbit around the Earth. This will be one to watch.

You might be surprised to learn, in fact, that there are already 74 international and Australian companies with a presence in WA operating in space and space-related services. An example is the Airbus' Zephyr Project which announced in June that it will base solar-powered, very high altitude drones in Wyndham as they hope to “bridge the gap between current generation unmanned aircraft and satellites”.

These and other significant future growth opportunities were highlighted in a recent comprehensive State government review of our space industry capability. It noted our competitive advantage in agriculture, mining, offshore oil and gas, remote operations and robotics. As the Premier has mentioned, these will be the focus of ongoing State government initiatives.

Nationally, a “Review of Australia’s Space Industry Capability” was released in March this year. The review, chaired by the new Head of the Australian Space Agency, Dr Megan Clark, confirmed that the current rapid reinvention of the global space industry has not been seen since humans walked on the moon. The review acknowledged that the link between security and space offers both challenges and opportunities.

Importantly, it reinforced our capability in secure space communications, saying we can play a role in supporting global rules for safe and secure operations in space, as well as developing standards for responsible behaviour in space.

It outlined a broad range of areas where Australia could harness its competitive advantage and capabilities. Those include communication technologies and services, and satellite and deep space communications ground stations.

There are also opportunities for us in Space Situational Awareness (SSA) and debris monitoring as part of global networks. As well in Positioning, Navigation and Timing (PNT) infrastructure to enhance the competitiveness of the broader economy including in agriculture, transport, mining, oil and gas, and national security.

Other capabilities include the application of advanced integrated Earth observation satellite data for the benefit of all Australians, and to increase Australian exports of these services.

Of great promise are the research and development prospects in areas of national strength to support our participation in joint space missions and space tourism. As well, the extraordinary industry applications for space and remote medicine, space physics, planetary science, quantum communications, artificial intelligence, and robotics and autonomous systems for remote asset management on Earth and in space.

All of these exciting space possibilities will be outlined and expanded upon by Dr Clark, I am sure, when she gives her keynote address later this morning.

Of particular importance to our space future – our “giant leap” so to speak – has been the recent establishment of Australia’s first space agency. While it initially will operate out of Canberra, I am hoping along with the rest of Western Australia that our strong case to headquarter the agency will be successful, but not the least our involvement as a future super hub.

The agency is charged with working to transform and grow the industry by setting national policy and strategy, leading international space engagement, and inspiring the Australian community and the next generation of space entrepreneurs.

It is a brilliant development and bodes well for Australia’s internationally respected space industry, gaining a greater share of the expanding approximate \$A480 billion global space market.

Importantly, the agency recently received formal backing from the US House of Representatives in a resolution which commended the Commonwealth government and recognised our cooperation on, and I quote:

*“...space research, exploration, and utilisation, including on terrestrial research, commercial activities, and human and robotic space exploration”.*

It also stated support for “deeper co-operation” with Australia “in contributing each country’s unique strengths and resources to mutual prosperity and security”.

I share the excitement of Dr Clark when she spoke of the agency’s future work in these terms:

*“No other industry can inspire nations quite like space, where human ambition can set its sights on interplanetary missions, colonisation beyond Earth and the opportunity of finding new life.  
“We can dream this big because of the space-based technologies that have connected the world in unprecedented ways, and in the coming decades Australia has the opportunity to become a global leader in pushing Earth’s links with space even further.”*

Naturally, there are complex issues around our economic and security interests in space. A 2017 Foreign Policy White Paper flagged these as poised to grow with the expansion of space-based and space-enabled capabilities. It emphasised the need for “robust rules and norms to maximise the benefits of greater access to space while tackling challenges such as debris”.

We face defence and foreign policy issues also that involve challenges and potential risks to our national security and sovereignty.

Our relationship with the US has been vital to our ongoing focus on the space domain, particularly over the past half-decade where we have entered into agreements to host the next generation of joint facilities. These have been crucial to the bonds which drive our alliance system.

We often talk of that in terms of shared values and history. That's important but frankly secondary. Ours is a military alliance and those new joint facilities combined with the others at Alice Springs and naval communications at North West Cape are an important card for us in that relationship.

I am acutely aware of the need for the Department of Defence to be at the forefront of space developments. It must be ready to manage the consequences for Australia of non-geographic threats in cyberspace and in space. Hence our recent national commitment to investing in modern space and cyber capabilities, as well as infrastructure, information and communication systems that will support defence capability in the future.

We need this because potential threats clearly exist. This is despite the 1967 Outer Space Treaty enshrining the principle that the space environment must be protected as a global commons, and used peacefully to ensure the future of our planet and humankind.

Regional cooperation is the modern vanguard fundamental to that ideal. We must strive to lead the way in new developments and ideas as we continue to explore and expand our peaceful joint space interests.

This conference brings together your expertise and talents which, consequently, progresses cooperation and partnerships within the Indo-Pacific region towards a hopefully dynamic, safe and secure space future.

I wish you all a very productive and enjoyable conference.