

Space for Innovative Communication Solutions

Australasia Satellite Forum
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Telco Subject Matter Expert



Presented by
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Come Share My Journey

- My background & Satellite Communications
 - Satellite Communications is 75% of the Industry!
- Opportunity is ***now*** – the stars are aligned!
 - Satellite 2.0 timing – “the next Internet”
 - Australia has some ‘credibility’ (science)
 - Government *Decision* on Space Agency
 - A ‘sort of’ bipartisan industry policy
- Enhanced comparative advantage
- Satellite communications to date!
- Observations





My Journey in Satellite Communications

■ Research Experience

- Telstra TRL, ITU and satellites
- Aussat and competition
- CTIN (Adel Uni) and satellite industry research

■ Industry/Government (including ACMA)

- NBN and role for satellite for the 3% ('Sky Muster'?)
- ITR (UniSA) Advisory Board
- USO and satellite (replace copper in the bush?)

■ Industry/Universities Role & Commercialisation

- Communications Alliance Group (CASSG)
- Challenges of universities & commercialisation



Australia has 'credibility' in Space

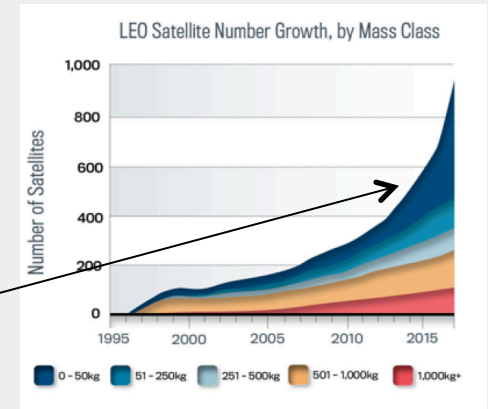
Note: IAC 2017 Conference in September hosted in Adelaide

- Demonstrated achievements in Space
 - 3rd to put rocket into space (after USSR and US)
 - WRESAT (50th anniversary) and Woomera
 - Paper in recent TelSoc Journal
<https://telsoc.org/ajtde/2018-03-v6-n1/a144>
- Our unique contributions
 - Moon landing (remember the film 'the dish')
 - Radio astronomy and CSIRO (now SKA!)
- CSIRO and commercialisation
 - WiFi patent out of Radio Physics



Australia's Opportunity is *now*

- Space industry dramatic change!
 - Space 2.0 changes (eg cubesats)
 - Lower barriers to entry, private sector led
- Political bipartisan support (eg unlike NBN)
 - Space agency decision - \$26/41 million start
 - Canberra and State Nodes (governments collaborating/competing (eg SA, ACT and NT agreement)
- Synergy with Innovation agenda
 - Recognition of contribution to economic growth
 - Promising 'start ups' (eg Myriota) kicking goals
- Industry Growth Sectors – 'down stream opportunities'
 - Comms sector – objective of 8% growth per annum





Satellite Communications – lessons learnt

- Aussat and telecommunications history
 - Confused satellite role in competition agenda
 - Telstra 'view' of satellite
 - DRCS was not a 'satellite' substitute
- Government programs
 - ABG program – a good start
 - ISS service prior to NBN satellites – excess demand!
- NBN and Sky Muster
 - Ka band satellites recommended by Expert Panel
 - NBN Co implementation poor
- Indigenous phone program – a success!!!!



Enhance Comparative Advantage

- Need & opportunity - Australia
 - large continent, low population, developed economy
 - Situated in region of high growth
 - Exports to future growth regions (eg Africa)
- Space expertise
- Key industry potential
 - Mining
 - Agriculture
 - Remote communications





Satellite Evolution to 2.0 and Start Ups

Global

- OneWeb
- SpaceX

Australia since 2016

- Saber Astronautics
- Gilmour Space
- Neumann Space
- Myriota
- Fleet Space



Aussat in early 80s



NBN in mid 2016

3/5 based in Adelaide!



What are we going to do?

- Space agency - unique role – *underway!*
 - Expert Report March 2018 – released 14th May 2018
 - Megan Clarke – interim CEO
- Integrate satellite communications into industry
 - Listen better to the market (eg remote users)
 - Resolve ‘conflicts of interest and focus’
- Continue to encourage collaboration
- Nurture National Space Innovation
 - Attract funding & share learning
 - Commercialisation acceleration
 - Space innovation support



University/Industry Collaboration



Global Collaboration

CRC for Spatial Information

Space Environment Research Centre.

New CRC Proposal in Innovative Satellite Communications



Observations - Overcoming the barriers

- Maintain & *Sustain* government momentum
 - Ongoing bipartisan support (eg unlike the NBN)
 - State & federal collaboration
- Industry and government collaboration
 - Need to craft unique Australian space agency role
 - Focus on future sectors – ‘down stream’ communication solutions
 - Where are the >20,000 jobs to be?
- Overcome current culture
 - ‘Invented here’ culture
 - Parochial fiefdoms (including state confines) can impede growth
 - Overly ‘supply focused’ of current industry



REACH FOR THE STARS

WE CAN DO IT!