The Vocus Communications Australia Singapore Cable (ASC) is a 4,600km submarine cable system linking Perth, Western Australia, to Singapore, via Indonesia. The four-pair fibre network will deliver a minimum of 40Tbps of capacity and a reduction in latency from Sydney to Singapore, compared to alternative routes.

Opening the Asian market
Demand for direct connectivity from Australia to Asia has grown exponentially over the years. Vocus analysis of TeleGeography market data predicts demand to be over 75Tbps by 2025, which necessitates reliable and scalable submarine cable infrastructure.

Vocus’ ASC meets that market expectation with the highest bandwidth cable (40Tbps) connecting Australia to Singapore, via Indonesia, and providing a commercially viable alternative to businesses and consumers.

In an era where quality of service is determined by latency, Vocus’ ASC provides a reduction in latency when compared to other alternatives in the market.

The reduction in latency and scalability of bandwidth will also combine to improve speed of access of content sourced from Asia for Vocus’ customers. Instead of routing via the US, content from Asia will take a more direct path into Australia.

RFS on track for July-Sept 2018
Alcatel Submarine Networks (ASN) is installing the cable system, which is currently being laid by the ASN ship Ile de Batz between Christmas Island and Perth in Western Australia. A second ship, the Ile de Re has started laying the cable between Christmas Island and Singapore.

Construction milestones already completed include:
- Cable manufactured
- Power feed equipment manufactured
- Repeater and branching units manufactured
- HDD and land cable duct run
- Cable landing station construction and fit out (Christmas Island to follow)

We are the submarine cable experts
Vocus is one of the most experienced carriers to have deployed submarine cables in Australia and Asia. Vocus successfully completed deployment of the North West Cable system connecting Darwin to Port Hedland.

Our team has extensive experience in:
- Working with ASC subcontractors
- Marine operational compliance
- Offshore platform construction
- Permitting
- NOC integration
Overview
- 4,600km cable length
- Approximately 50 repeaters
- 4 fibre pairs (100 wavelengths per pair)
- 40Tbps initial design capacity (100 Gbps per wavelength)
- 24/7 monitoring
- DC interconnects in all Australian capital cities, Jakarta and Singapore

System details:
- The ASC system is based on repeated 100G technology (150G on the shorter Indonesia to Singapore leg) using Dense Wavelength Division Multiplexing (DWDM) in the 1550nm window

The cable system will be supplied and installed by Alcatel Submarine Networks (ASN) and will include:
- ASN’s OALC-4 submarine cable featuring strong protection against external aggression for its steel vault structure and armoured protection
- High performance D+ fibre with large core area
- Highly reliable repeaters designed for wide-band WDM applications with built-in supervisory system allowing amplifier input and output monitoring

ASC will utilise ASN’s new ‘1620 SOFTNODE Submarine Line Terminal’ equipment providing:
- High traffic availability through redundancy of key components
- Large capacity and compact size
- High performance 100Gbps advanced coherent line interfaces
- Software configurable client interfaces supporting various services

The ASC system will also use:
- Highly reliable and duplicated DC power feeding equipment with single end feeding capability
- State-of-the-art submarine network management accessible from all terminal stations and the NOC for preventive and corrective maintenance, including wet plant fault localisation
- A robust Data Communication Network (DCN) featuring protection against wavelength failure and cable break

Cable reliability
To minimise the likelihood of cable damage in the northern section within the Indonesian archipelago, we have taken several precautions:
- The cable is plough buried below the sea bed to a default target depth of 1.5 metres for the entire section
- In the general areas where there is a history of a higher rate of cable damage the target burial depth has been increased to 2 metres
- We have designed our cable path to avoid areas with a history of frequent cable damage and be located between other cables that have experienced very low cable damage rates

Product diversity
The availability of ASC extends Vocus’ on-net reach to Indonesia and Singapore. While Vocus has provided connectivity to Singapore over SMW-3, with ASC Vocus can now provide wavelengths, in 10Gbps or 100Gbps, on that route plus much greater bandwidth and scalability for E-Line and other MPLS network services.

Contact us
For additional information or enquiries contact the ASC team at info@ascinternational.net or visit our website at www.australiasingaporecable.com

Want to learn more about how we can help you? Contact your Vocus Account Manager or call us on 1300 88 99 88 or visit www.vocus.com.au