

BACKHAUL BLACKSPOTS INITIATIVE STAKEHOLDER CONSULTATION PAPER

Introduction

The Australian Government has demonstrated a commitment to delivering sustainable and affordable broadband services across Australia. Next generation broadband networks are being deployed in major metropolitan areas, facilitating greater economic and social prosperity.

However, the less commercially attractive nature of providing services in many regional and rural areas, as well as metropolitan black spots, is creating an economic and social divide.

While earlier incentive programs were successful in encouraging the upgrade of existing infrastructure, many areas remain without true broadband competition and available services remain below metropolitan standards.

The Australian Government's Backhaul Blackspots program provides an opportunity for the Federal Government to ensure ubiquitous, competitive and innovative broadband services throughout Australia. With a particular focus on providing an immediate solution to the issue of competition in regional areas in Australia.

The lack of competition has resulted in a massive divide in regional Australia. For companies like Soul Australia who have a strong focus on building and developing regional infrastructure the lack of competition has made it very difficult for tier 2 and 3 carriers to build economic regional broadband solutions for local communities and businesses as the existing single carrier backhaul cost are so high it effectively blocks competition.

The proposed Backhaul Blackspots program will greatly assist in changing the playing field.

Why Soul?

Soul Australia started as a regional carrier. Originally founded in the Hunter Valley with Newcastle as its main office Soul has always been focused on building and developing regional infrastructure in NSW and more recently Australia as a whole.

Whilst many other players talk about increasing their regional presence the simple fact is that Soul has actually rolled out regional services and effected competition in regional Australia in many towns. Some of the key examples of this include:-

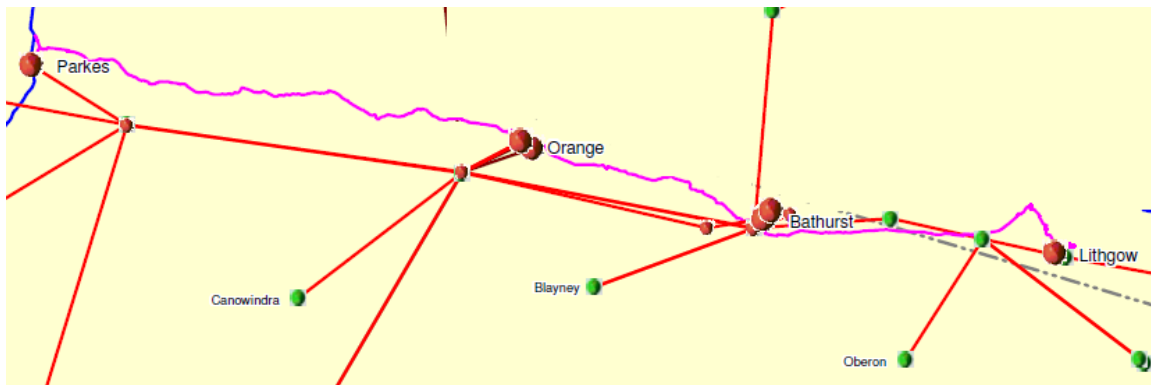
- Soul, through its NBN television business implemented the worlds first High Definition IP TV network across a digital MPLS data network throughout northern regional NSW to

deliver TV services to communities. Furthermore this network was used to deliver IP data and internet services to businesses in a number of regional town's communities.

- As part of the NSW state government broadband network Soul built a regional network to the major regional towns in NSW. As a result, a total of 24 towns were added to the Soul network and local exchanges built to deliver services to Government, Corporate and local businesses in these towns. Furthermore the same infrastructure has been used to deliver consumer grade ADSL and ADSL 2+ services to these communities in competition to the only other provider. A list of these towns is shown below. It should be pointed out that this infrastructure directly effected competition to around 500,000 Australian's with some services dropping in price significantly as a result of our presence.
- In early 2000 Soul purchased Comindico and added over 100 new regional Network Access Points to its network all in regional Australia. Since then a large number of additional Network Access Points, NAP's, have been added to expand our regional presence. The majority of these were in regional Australia with a proportion only able to obtain backhaul from one provider.
- The recent purchase of TPG has added a significant number of sites to the Soul/TPG network. Whilst a large proportion of DSLAM sites are in metropolitan area's many new sites are now planned in regional area's further increasing competitive pressure in regional Australia.

Soul has partnered with both Federal and NSW State Governments to implement government funded services in the past, leveraging funding to turn the business case into a viable one. Our track record of delivering these services further indicates our ability to work with government and deliver successful results to regional towns and communities where, without funding, deployment of infrastructure would not be possible. Some examples include:

- In early 2006 Soul together with State and Federal Government funding implemented a backhaul service between Lithgow and Parks in NSW. This service also interconnected the towns of Bathurst and Orange providing competitive fiber into those towns.



- Soul together with Country energy and Federal government funding under NCF 27 implemented fiber services in over 16 regional NSW towns.
- Soul won the NSW government radio network in 2005 and has been rolling out infrastructure for emergency services throughout regional NSW to some of the states most remote area's and towns. With further funding this infrastructure can be leverage to provide competitive backhaul to these towns on a very low cost basis.



In our view, the combination of timing and opportunity is such that this round of funding can deliver future proofed services, not only by meeting the Government's objectives of providing metropolitan equivalent services nationally, but also by providing services which are independent of Telstra.

By assisting in the capital cost of infrastructure where the business case is not viable for carriers, such as Soul Australia, to build networks on our own the Government is able to maximise the return on its investment, as communities will receive the benefits of the new alternative infrastructure in addition to Telstra's competitive response.

Funding should primarily assist telecommunications infrastructure competitors achieve scale more quickly, which will deliver consumers improved access solutions. Additionally, in supporting established, listed Australian companies, the backhaul funding will deliver a sustainable broadband solution that will provide returns well beyond the life of the program.

Of particular importance is the ability of Soul to leverage the existing infrastructure that we have in regional area's. As these exchanges exist already in regional Australian towns Soul has the unique ability to leverage these towns as backhaul aggregation points significantly reducing the costs of backhaul rollout due to their proximity to the actual blackspot towns verses paying for the cost of bringing the services all the way back to metropolitan area's. Thus offering the Federal Government more "bang for the buck".

As a simple example, Soul's existing network access points will allow aggregation of infrastructure within the rural and regional area's. Town's such as Dubbo, Orange and Bathurst in NSW, where Soul has existing NAP's, can be used as aggregation points for blackspot towns radiating from these points, offering the ability to provide a regional and rural ring architecture or a star and spoke architecture, (depending on location), allowing a leveraged approach to any funding.

Using this approach, towns which have no competition and where the business case of deploying fiber backhaul tails and local infrastructure is not currently viable can now have competitive infrastructure.

Also important is the ability of Soul Australia to interconnect to the National Broadband network, NBN, moving forward. Due to the technology chosen originally by Soul engineers some 5 years ago our core MPLS infrastructure and SDH backhaul has the ability to easily interconnect into any long term NBN infrastructure. All existing and proposed switching hardware and infrastructure has the ability to interconnect via fiber or copper at speeds of up to 10Gbps in some locations, effectively giving Soul Australia a 'plug and play' advantage in our NBN interconnect capability.

4. Issues for consultation

4.1 Locations

Stakeholders' views are sought on the following matters:

1. priority locations that are lacking an alternative backhaul supply and the reasons for their priority

SOUL Response

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High sites which are essential for DTV, local wireless providers, emergency radio networks and mobile services are generally serviced by microwave. As the age of the national microwave network increases and with the new and ever increasing bandwidth requirements, the need to move to fibre to continue to service the existing and new business is apparent.

Tower space is now limited with some structures not able to service additional antennas. A solution would be to provide services via fibre to the high site to alleviate the existing bandwidth constriction.

Example of high site (Mt Nardi) locations essential for DTV, local wireless providers, emergency radio networks and mobile services. The SOUL Network Access Points (NAPs) in this example are Casino, Ballina, Murwillumbah and Kingscliff which are all in backhaul black spots.



2. possible routes for the links to the priority locations, including any potential locations where backhaul capacity should be broken out, and

SOUL Response

Route planning will be undertaken in any subsequent rounds in the tender process.

3. the contestable market in each location and the wholesale price points required to attract interest from access seekers.

SOUL Response

Pricing will be undertaken in any subsequent rounds in the tender process.

4.2 Design and operational parameters

Stakeholders' views are sought on the following matters:

1. the type and capacity of services and associated operational arrangements that the network operator should provide to access seekers, including the costs of delivering these services and the charges that should be levied

SOUL Response

Ethernet over SDH provides for a stable and proven technology which can be delivered to a range of access seekers such as digital television (ASI over SDH), mobile telecommunications (E1, E3, n * STM-1 or Ethernet) and radio networks such as the NSW Government Radio Network (GRN) which is groomed PDH over SDH backhaul transmission.

Standard rate cards would be produced for links and locations.

Fixed contractual agreements with foundation agencies and companies would benefit the business case, in the instance of low population density, where the infrastructure could not be suitably commercialised via a DSLAM and potentially a regional wireless grid.

Soul would aim to provide services at a cost basis of the same or similar to that in Metropolitan area's. This would be for most service types including copper, fiber and Wireless data.

2. the locations at which points of interconnect should be sited to enable secure and ready access by access seekers

SOUL Response

SOUL is a strong supporter of the concept of installing where SOI (State Owned Infrastructure) exists. This provides for a quick deployment when the government is able to assist in the land access and site acquisition component of the infrastructure deployment. Once deployed, telecommunications carrier partners are then able to initially own and operate these additional points of presence very cost effectively by leveraging their extensive management and support experience. Community benefit would be realized if the repeater sites were located at Hospitals, major community health centers local Police, Ambulance or Fire stations. In addition Local Government sites such as council owned infrastructure can also be leveraged.

3. the timeframes and costs associated with the planning, construction and commissioning of backhaul infrastructure in various terrains and locations

SOUL Response

As a general rule of thumb for a link; the design phase is <2 months, planning and acquisition will be another 4 months with the construction and commissioning to take place before the 11th month. With multiple links being installed you could expect to see initial links in the project active in the 6th month.

All of the project timelines are dependant on distance, land rights and the availability of workforce as the number of links to be deployed may drive a short fall in trained fibre installers. This would also present a great opportunity for employment.

4. the extent to which fibre repeater/regenerator equipment would be required at locations other than population centres, and the approach in regard to the powering and housing of this equipment

SOUL Response

Each location would require planning based on the available infrastructure. SOUL has designed links and repeater sites for both major rural and remote locations using both grid and solar technology with generator & battery back-up systems.

5. the relative merits of deploying links that provide an alternate route to existing backhaul infrastructure, and

SOUL Response

Alternative routes to existing backhaul infrastructure is a great benefit in the instance of servicing other locations such as radio high sites which will continue to deliver emergency radio, digital television and will ensure the infrastructure (bandwidth) is available for future wireless digital services.

In addition, whilst alternative backhaul offers competitive services to the local supplier it also offers redundancy and path diversity to the local community resulting in more reliable services overall.

6. the relative merits of completing ring architectures as opposed to constructing spurs.

SOUL Response

Whilst there are merits for both ring and star/spur architectures the preferred architecture would be ring as it offers a higher level of redundancy. This however comes at a cost as redundant backhaul tails can almost double the cost of deployment. The design would endeavour to provide for a ring architecture however the business case for each blackspot town would need to be assessed and the appropriate design undertaken based on location, geographic constraints, local population and potential users.

4.3 Operational and ownership arrangements

While the Australian Government has not made a final decision on the specific implementation and operational arrangements for this initiative, a potential model that aligns with the Australian Government's objectives and requirements for this initiative is outlined below.

- Individual companies or consortia build new optical fibre regional transmission links to regional centres with the ownership retained by the Australian Government, and the proponent holding a long term indefeasible right of use over a number of optical fibres.
- The number of regional centres that can be assisted with this measure will increase if there are partnership arrangements. The projects that receive funding from the Australian Government would also attract contributions from other parties consistent with the value of the opportunity to those organisations.
- The involvement of an existing wholesale operator would enable competitive services to be offered to retail service providers immediately after the infrastructure has been put in place. For an agreed period the successful proponent could be responsible for maintaining and operating the infrastructure. The transmission services would be provided to all access seekers on equivalent terms and conditions and would include:

- o links between the communities on the new infrastructure to the point that the new link terminates with existing transmission infrastructure; and
 - o links between the communities on the new link to a cost effective point of interconnection in the respective state capital.
- At a specified time the Australian Government will transfer the ownership of the infrastructure to the national broadband network company, which will deliver backhaul services over the link or acquire the services from the successful proponent.

Stakeholders' views are sought on the following matters:

1. the proposed model including the ownership arrangements and commercial viability

SOUL Response

Models would be based on the route, number of towns and commitment from other parties. SOUL is open to fair and equitable commercial arrangements.

2. the period of time for which indefeasible right of use should be available to the network operator, and

SOUL Response

A response to the time frame for the indefeasible right of use would need to be taken into account with the final locations and number of links to ensure the ROI (Return On Investment) is met.

3. alternative models that would meet the Australian Government's objectives.

SOUL Response

SOUL is not proposing any alternate models at this time.