National Satellite Initiative (NSI) – Round Two
Report on Industry Canada Consultations with
Satellite Service Providers & Satellite Operators
(February 2004)

Industry Canada's Broadband Office held informal consultations in Ottawa with a number of Canadian Satellite Service Providers (SSPs) and Satellite Operators from around the world over several days in February to prepare for Round Two of the National Satellite Initiative (NSI). The purpose of these informal consultations was to: Raise awareness of the NSI program; Engage the satellite industry in the preparatory stages of the program delivery, i.e., seek their views on the most practical way forward; Obtain information on the state of the relatively small SSP industry in Canada (notwithstanding Telesat Canada and other major operators), and the extensive foreign Satellite Operators industry; and, Obtain company profiles.

Out of the $155-million dollars under the NSI program, $85-million dollars is being dedicated to making satellite capacity available for the deployment of broadband services to remote areas unable to receive broadband in any other reasonable way than via satellite. As a result, it is very important that the NSI work in conjunction with key stakeholders in the marketplace (e.g., service providers and operators) to determine the most practical approach for the procurement, distribution and use of the satellite capacity. This is viewed as one of the key elements towards the success of the NSI.

We are pleased to report that a wealth of information was indeed exchanged during the informal consultations (a first in Canada with the Government of Canada (GoC), Satellite Operators and Satellite Service Providers (SSPs)), and that our objectives were met. The following is a brief list of our general observations. For more details, please find attached a summary based on the specific questions participants were asked to address (Annex 1), and a list of participants (Annex 2).

General Observations:

- **The Key Players of NSI are**: NSI/Industry Canada/Broadband Office, Satellite Operators, Satellite Service Providers, Communities/Applicants, and potentially a Satellite Capacity Manager.

- **Many Satellite Operators also act as Service Providers & many Service Providers also provide consulting services** – there is no clear division of roles in the Satellite Industry.

- **Educating and informing Communities about satellite technology is crucial** - many lack experience, resources and technical know-how (especially Aboriginal and First Nations) to take advantage of NSI. The BBD Office should lead the transfer of knowledge and mentorship to Communities with the assistance and facilitation by SSPs.

- **Aggregation of Communities and sharing of ground facilities and services is key** to benefit from economies of scale resulting in more viable business cases.

- **Bulk purchasing of satellite capacity ensures efficient use/management** and increases cost savings, growth potential and program sustainability.

- **A balance is needed between network efficiencies, economies of scale and competition** in order to maximize benefits for Communities and ensure sustainable projects.

- **NSI provides only a partial solution – For some communities, other sources of investment may be required** to supplement their application.

Conclusion:

To conclude, the range of the diverse roles played by those in the satellite industry and the differing views expressed on the program have encouraged us to re-examine our approach for the delivery of the National Satellite Initiative - Round 2.

We would like to thank all of those who participated in the Industry Canada informal consultations - Your input has been invaluable. Should you have any questions or require additional information on the NSI, please contact the Broadband Program Office accordingly.

Annex 1

Summary of Informal Consultations with
Satellite Service Providers & Satellite Operators
February 2004

1. NSI Program Delivery

The preferred approach for procurement and distribution of the satellite capacity to Communities was as follows:

- Community aggregation and network sharing is key to benefiting from economies of scale and resulting in more viable business cases;
- Purchasing satellite capacity in bulk for use by community clusters would ensure more efficient use and management of the satellite capacity, as well as increase cost savings, growth potential and program sustainability;
- Satellite Operators confirmed that, the more bandwidth the lower the cost per MHz, and in some cases, the longer the supply contract the lower the cost; most are open to the 'ramp-up' approach as they have multi-year scaleable contracts – they agreed to clarify the costs for the different types of satellite capacity, i.e., C-Band, Ka-Band, Ku-Band, and Ku Extended (as some restrictions may apply in coastal communities), and the contract duration;
- Communities receiving capacity should be able to choose the appropriate aggregation patterns, as they know where their synergies lie, e.g., trade patterns, travel routes, patient referral routes, flow of goods, people, etc.;
- Non-for-profit and Aboriginal SSPs would like to be involved in the community aggregation process;
- Telesat prefers a national/uniform aggregated network on the same satellite, and would rather compete on a satellite network basis, than on raw satellite capacity;
- Foreign Satellite Operators prefer aggregation by region to accommodate their limited satellite footprint coverage (mostly in the eastern, western or southern parts of Canada); however, some believe this is not a sustainable approach as there is no room for network growth beyond the limits of a given satellite footprint;
- There were different views on how the Satellite Capacity could be delivered under the NSI:
    1. <u>NSI purchases and allocates the satellite capacity:</u> Some SSPs and most Satellite Operators supported this approach saying that it would help ensure competitive prices and efficient allocation to Communities/Applicants (i.e., the legal entity) who would be responsible and accountable for its use; however, this approach will likely require a Satellite Capacity Manager.

    2. <u>NSI should give funding directly to successful applicants to purchase the satellite capacity:</u> Some SSPs felt that Communities (not NSI) should be responsible for acquiring the satellite capacity; however, most agreed that this approach could result in less efficient utilization of the funds specifically for procuring satellite capacity.

3. NSI should give funding directly to the SSPs to purchase the satellite capacity: Some SSPs preferred to have control over the satellite capacity; however, most agreed that there would be no protection for Communities should they wish to change SSP.

- The NSI must determine who is to be liable/accountable for the satellite capacity; this could be done through Contribution Agreements.

2. Pre-Certification Process

There were varying views on whether a pre-certification process is desirable, or not, for 1) the selection of SSPs by Communities, and 2) the selection of Satellite Operators by the NSI.

2a) Satellite Service Providers (Split Views):

- Those in favour felt that pre-certification of SSPs would reduce confusion in the marketplace – as there are only a few appropriate companies, i.e., that have a hub;
- Those against preferred a more inclusive process whereby the NSI would provide a list of all available SSPs for Communities to choose from, including SSPs that offer only consulting services;
- Others – preferred that 'technological solutions' be pre-certified.

2b) Satellite Operators (Consensus):

- Most were in favour of a pre-certification process starting with a Request for Supply Arrangement (RFSA), which includes general Terms & Conditions (T&Cs), followed by a subsequent Request for Proposals (RFPs) for specific NSI Applicant requirements;
- RFP Criteria: Most agreed that RFPs should be issued for specific requirements to benefit from cheaper satellite capacity offered by foreign Satellite Operators having only partial coverage in Canada, and should identify, among other things, the:
    - Specific type and amount of bandwidth (% MHz/Transponder);
    - Specific location/region; and
    - Minimum EIRPs (Telesat).
- 'National Coverage' should no longer be a criterion, because allocation of bandwidth by specific location/region will foster competition between all Satellite Operators, and likely result in more competitive prices;
- Some requested more than 10 days to evaluate and respond to RFPs;
- The American companies requested NSI to consider using their T&C's, or elements thereof;
- Development of T&Cs requires balancing between selecting as many Satellite Operators as possible to increase competition and choice for Communities, and minimizing the level of risk mitigation, e.g., for the liability of Satellite Capacity;
- Most agreed to provide Case Studies that demonstrate their ability to support developing Communities.

3. Educate & Inform Communities

Most of the targeted NSI Communities lack experience, resources and technical know-how to enable them to take advantage of the NSI program (especially Aboriginal and First Nations). It was felt that the Broadband Office should play a lead role in the transfer of knowledge and mentorship to eligible Communities and assist them in applying for NSI Round 2. SSPs could also facilitate and assist in the education of Communities (refer to Section 4 below for more details regarding specific roles).

4. Key Players & Their Roles

The key players are NSI/Industry Canada/Broadband Office, Satellite Operators, Satellite Service Providers, Communities/Applicants, and potentially a Capacity Manager. Their roles have been identified as follows:

4a) NSI/Industry Canada/Broadband Office: As the manager of the NSI Program, the Broadband Office should play the following role:

- Manage the NSI program and ensure sufficient time for program delivery;
- Select a procurement model which best meets Communities' needs and maximizes competitive benefits, e.g., procure satellite capacity (directly or indirectly) on behalf of Communities and ensure its equitable and affordable access;
- Educate Communities and disseminate information on the NSI and satellite technology in general;
- Provide Guidelines, Sample Templates, or Qs & As on Applications, RFPs for Satellite Service Providers, network models, last mile, etc.;
- Provide a list of sources for Government funding & programs, hardware options, SSPs & Satellite Operators, etc.;
- Establish new/improved relationships and partnerships with Communities;
- Better coordinate program activities for greater linkages between Federal Departments (e.g., Health Canada, Industry Canada, INAC, RCMP), between levels of Government (Federal, Provincial & Territorial), and with Aboriginal Organizations (Band Offices, Co-Ops, etc.); and,
- Conduct face-to-face meetings or travelling road shows.

4b) Satellite Operators: Provider of Satellite Capacity:

- All Operators (with the exception of New Skies, which only sells satellite capacity) offer end-to-end services (or, a combination thereof) through contracts with Satellite Service Providers and customers, etc.;
- All Operators offer authorized satellite capacity in Canada, however coverage varies: Telesat offers national coverage; SES Americom and PanAmSat cover most of Canada; and all others provide coverage to only parts of eastern, western and/or southern Canada;

- All foreign Satellite Operators are willing to increase their satellite coverage in Canada depending on the demand/business case;
- All (except Telesat) do not have a presence (an office) in Canada;
- All (except Telesat) need to establish communications/partnerships with Canadian Satellite Service Providers & requested assistance/info from NSI.

4c) Satellite Service Providers (SSPs): The following is a breakdown of the roles some play in the industry today:

- Deploy, own and operate satellite network facilities (SSI Micro, Infosat, RAM Telecom, NWTel, Ardicom, Global Wireless Satellite Network, K-Net Services, LINCSAT, Bell Enterprises, Stratos); or,
- Provide consulting, networking, and information and communications technologies (ICT) services (Donna Cona, Agnitio, Six Dion); or,
- Deploy, own, and operate the network facilities & the Satellite(s) (Telesat).

The role of SSPs varies and needs to be clearly defined under the NSI; however, all agreed that they should assume the following roles:

- Facilitate/assist the education of Communities;
- Create awareness, e.g., through Internet Cafés/Hot Spots;
- Lead and/or assist with NSI Applications, e.g., determine Community needs and satellite capacity requirements - Many SSPs excel at managing the distribution and use of limited capacity among several users, (e.g., time-of-day management);
- Provide turn-key services/solutions and advise on service packages and costs;
- Interface with Satellite Operators;
- Deliver satellite services;
- Implement and operate local distribution networks.

4d) Community/Applicant Role: A Community Champion (e.g., Band Office, local Government, etc.) and legal entity that should:

- Select Satellite Service Provider(s);
- Purchase and deploy ground infrastructure;
- Develop and submit NSI application;
- Receive Satellite Capacity;
- Implement and manage their satellite project.

4e) Potential Satellite Capacity Manager - Role: The NSI program is a long-term commitment, which may require a Satellite Capacity Manager. There were varying views on which organization would best play this role:

- The NSI - to level the playing field; or
- The private sector, i.e., the SSPs or, Satellite Operators (some indicated they could interact with other Satellite Operators).

5. Market Impact / Unfair Competition

5a) Satellite Service Providers (Market Distortion is Expected from NSI):

- It is understood that there may be some form of market distortion/disruption, but that new opportunities may also arise as a result of the NSI;
- The combination of funding from the "Broadband for Rural and Northern Development Program" and NSI appears to be causing market distortion by potentially creating new subsidized competitors in low margin markets, thus creating 'Churn', (i.e., encouraging customers to switch SSP) and changing roles in the marketplace;
- It was suggested that NSI is already creating some uncertainty as Communities are opting to delay renewal of their service contracts until more is known or understood about the NSI program;
- Some SSPs may have difficulty delivering new satellite capacity acquired by the Government because they already have supply contracts, or provide bundled services, under contract with a Satellite Operator:
  - Satellite capacity is a major source of revenue for some – its removal from the equation will likely reduce cost-efficiency and change business models (i.e., change end-to-end user packages resulting in tighter margins based only on revenues from, e.g., earth stations, local distribution networks and maintenance);
  - The percentage of costs for satellite capacity in bundled service packages varies amongst SSPs, e.g., from 50-60% to up to 70-80%;
  - For smaller SSPs, requests for contiguous capacity to existing capacity should be allowed to maximize and add more value to the existing infrastructure, e.g., hubs, earth stations, etc.;
  - Good business cases will be difficult to make in smaller Communities.
- More diversified companies believe they will adapt, i.e., obtain revenues from selling hardware and providing complementary value added services, e.g., consulting, training, network management, etc.;
- It was felt that the term 'served markets' should be clearly defined to ensure that the NSI serves those un-served, and not those already served; most Institutions in the North have access to high-speed Internet, but not the consumers/households.

5b) Satellite Operators (Competition - New Market for Foreign Satellite Operators):

- Foreign Satellite Operators are concerned that entering the Canadian market will be difficult given existing contracts SSPs have with the national Operator (Telesat), and the bundled services offered;
- Conversely, concern was raised on the potential for foreign Satellite Operators to dump satellite capacity in Canada, resulting in unfair competition because they will be able to offer satellite capacity at artificially low prices;

6. Other Matters Raised

6a) Funding:

- NSI provides only a partial solution - Other investment may be required to support applications, especially from small communities;
- Federal Funding Programs (IC, HC, INAC, WED, DEC, ACOA, INFC) – need to be better coordinated at the Community level to support NSI applications;
- Aboriginal Network Communications Inc. believes that Communities should benefit, not only from the service, but revenue and profits should stay in the Communities.

6b) Satellite Technologies:

- The Biggest opportunity is in Ku Band;
- Some identified possible pilot projects in C band;
- Ka Band is a potential future offering;
- Very little knowledge of Ka-Band: Is it an opportunity or a threat?

Annex 2

PARTICIPANTS OF NSI CONSULTATIONS
CANADIAN SATELLITE SERVICE PROVIDERS (5, 6, & 9 FEBRUARY 2004)

Agnitio Networks Inc.	Scott Walker, Senior Partner Tomas Hala, General Manager
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