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Shri R. K. Arnold, Secretary, TRAI  
cc Shri Dr J. S. Sarma, Chairman, TRAI  
cc Shri S. K. Gupta, Advisor (B&CS), TRAI

30 April 2010

**NDS Response to Consultation Paper on Tariff Issues related to Cable TV Services in Non-CAS Areas**

Dear Mr Arnold,

NDS welcomes this opportunity to provide a written response to the Consultation Paper on Tariff Issues related to Cable TV Services in Non-CAS Areas. NDS would also welcome the opportunity to present its recommendations to and discuss them further with TRAI at your convenience.

NDS is the world's leading vendor of digital conditional access and digital rights management systems for closed pay TV systems, with over 119 million active authorised devices including set top boxes and digital video recorders incorporating its technology worldwide, protecting over \$40 billion of annual pay TV revenues. Many of the world's largest pay TV platforms use NDS conditional access technology including DirecTV (US), BSkyB (UK), Sky Italia, Tata-Sky (India), DirecTV Latin America, SkyLife (South Korea), Astro MBNS (Malaysia) and Foxtel (Australia). NDS is also the world's second largest provider of middleware for pay TV: NDS middleware, including pay TV middleware, has been deployed on over 143 million devices worldwide. NDS is the leading provider of personal video recorder software and firmware, with over 28 million personal video recorders deployed. (All deployment figures as at 31 March 2010.)

NDS employs over 1,200 software engineers in its Bangalore research and development facility, working on set top box middleware, interactive applications, personal video recorder software and mobile television software.

NDS's customers in India include Hathway Cable and Datacom and DEN for digital cable solutions and Tata-Sky and Bharti Airtel for DTH solutions. NDS is a key player in content protection for IPTV and also has a full range of content protection and interactive solutions for mobile television platform standards including DVB-H/-SH and MediaFLO. NDS technology supports and is used by over 8 million subscribers in India today.

NDS is thus a significant stakeholder in the current Indian pay TV market and is committed to increasing its stake as this market expands and new markets develop.

NDS has been engaged in regulatory consultation on broadcast pay television since April 2002, before TRAI assumed authority for some aspects of broadcast and cable regulation.

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NDS's responses are consistent with and similar to its responses to a range of over 20 TRAI consultations over the past five years.

In particular, NDS has consistently made the following recommendation, since 2004:

**TRAI should construct a light regulatory framework that promotes and enhances competition between platform operators and platform types (DTH, cable, IPTV etc).**

Unfortunately, TRAI appears neither to be constructing a light regulatory framework, nor promoting and enhancing competition, but rather imposing ever more complex regulations across the various platforms.

NDS's specific responses and recommendations are set out in the following response.

Please do not hesitate to contact me if you need any clarifications or have any questions on this submission, or if you would like to arrange a presentation of and / or further discussion on these recommendations.

Yours sincerely

Paul Jackson  
Chief Engineer  
NDS Asia Pacific Ltd.

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### **Responses to Specific Questions**

N.B. Only the questions that NDS offers responses to are copied below.

8. Is the market for cable services in non-CAS characterized by the following issues:

- (i) Under-reporting of the analog cable subscriber base

NDS has no direct, first hand access to information on reporting levels in non-CAS areas. However, estimates from sources including CASBAA and Media Partners Asia indicate that overall under-declaration in the Indian cable TV sector is in excess of 80%, in line with TRAI's findings.

'There are six major national MSOs – Hathway, InCable, DEN, DigiCable, WWIL, You Broadband and Cable, reaching almost 50 mil. homes, but remunerated for less than 7 mil. homes through JVs with LCOs (i.e. secondary points) and last-mile ownership of LCOs (i.e. primary point control).' **Fragmented Links**, page 339, *Asia Pacific Pay-TV & Broadband Markets 2010*, Media Partners Asia, Hong Kong.

29. Do you agree that complete digitization with addressability (a box in every household) is the way forward?

NDS agrees that this is one necessary step in regularizing the cable TV industry in India. However, it is far from a sufficient condition to achieve this.

Progress is required on several other fronts, including movement:

- from a registration to a licensing regime,
- to more rigorous and more rigorously applied financial and operational disclosure requirements, and
- to fundamental obligations to respect intellectual property rights.

NDS has discussed these issues in more detail in various responses to earlier Consultation Papers, including those on Restructuring of Cable TV Services (22 April 2008, 21 July 2008) and on Interconnection Issues Relating to Broadcast and Cable TV Services (23 January 2009), attached for reference.

Moreover, with minor caveats given at the time, NDS agreed with TRAI's own Recommendations on Restructuring of Cable TV Services, as published on 25 July 2008.

30. What according to you would be an appropriate date for analog switch off? Please also give the key milestones with time lines.

NDS does not believe that a country as diverse as India should have a single analogue switch off date. The authorities of some cities and states actually pushed for early digitalisation around the time of the first CAS mandate, though this was eventually applied only to certain areas in the four Metros. With DTH now firmly established as a

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competitor to cable all across India, MSOs and many LCOs are already convinced of the need to upgrade to digital addressable networks.

If analogue switch off dates and/or percentage rollout milestones are to be mandated, such mandates should only be after full and widespread consultation with the industry.

In terms of timescales, NDS notes that even in the USA, a pay TV market with a smaller number of subscribers, a much smaller number of cable operators, and significantly higher revenues per subscriber, the digital upgrade has taken over 12 years to date and that digital cable has achieved a penetration as at 31 December 2009 of 68.7% – meaning that approaching a third of subscribers have yet to be upgraded. Refer to <http://www.ncta.com/Statistics.aspx> for general operating figures of US cable and <http://www.ncta.com/Stats/CableAvailableHomes.aspx> for the digitalisation figures.

One reason for this is that a proportion of subscribers only take basic cable services. NDS sees no particular need to mandate rollout of digital set top boxes to subscribers that only wish to take a ‘basic service’ tier, although at some stage even their digitalisation will become economically viable across India.

Digital set top box technology has, however, advanced significantly and become significantly cheaper over the last 12 years, while average earnings have increased substantially (in both India and USA), so India ought to be able to achieve a faster conversion in the coming years than the USA has done over the last 12 years.

NDS believes that the following timetable could comfortably be achieved to complete full conversion to digital for pay TV, non ‘basic service’ tier cable subscribers:

- Metros within 2 years
- Other cities, major towns and towns in major urban areas within 5 years
- Rest of India within 8 years.

Such a timetable would need to be reviewed periodically (e.g. annually) to ensure that it achieves a sensible balance of pushing digitalisation and promoting sustainable transition.

31. What is the order of investment required for achieving digitization with addressability, at various stakeholder levels (MSOs, LCOs and Customers)?

NDS notes that quite detailed information on this is now available in the public domain, since the IPO prospectuses of DEN, Hathway and You Broadband & Cable were filed with SEBI and ROC and published by SEBI in the Offer Documents pages of its website.

32. Is there a need to prescribe the technology/standards for digitization, if so, what should be the standard and why?

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For consistency of regulation, and ease of rollout by cable MSOs, NDS recommends that the same technology/standards for digitalisation be applied to the current Non-CAS Areas as were applied to the existing CAS Areas.

The existing BIS digital cable set top box standard for the CAS mandated areas at: [http://www.mib.nic.in/writereaddata/html\\_en\\_files/actsrules/digital\\_srt\\_top\\_box.pdf](http://www.mib.nic.in/writereaddata/html_en_files/actsrules/digital_srt_top_box.pdf), for example, is a DVB based, open, pragmatic, reasonable standard and has allowed India to have among the cheapest cable set top boxes in the world, yet with a reasonable level of functionality and security.

NDS accepts that this standard/specification will need revision from time to time to ensure that cable MSOs are permitted – but not mandated – to use the latest technologies such as MPEG-4 video compression and high definition, to accommodate advances in TV set technology and to remove any requirements that have become obsolete, and will thus burden an increasing majority of subscribers for the benefit of a declining minority.

33. What could be the possible incentives that can be offered to various stakeholders to implement digitization with addressability in the shortest possible time or make a sustainable transition?

There is actually an inherent conflict between shortest possible implementation time and sustainability of transition.

NDS recommends that the latter should be given far greater priority than the former. There is no point at all in achieving a record breaking digital rollout if it is not sustainable. Arguably the lack of sustainability inherent in the original CAS mandate led to its initial postponement, then stay, then reluctant reinstatement and the subsequent unwillingness of the Government to push it any further for many years.

With regard to possible incentives, NDS proposes the following broad strategy.

1. Remove all existing obstacles to voluntary digitalisation first of all.
2. Offer a choice of regulatory regimes for digital and non digital pay TV services above the basic tier, with preference shown towards the digital pricing regime in, for example:
  - channel choice (some ‘digital only’ channels could be permitted for digital platforms only)
  - pricing flexibility (the existing a la carte regime works against this)
  - tax breaks over a number of years for investment in digital infrastructure.
3. Let the MSOs decide where to implement digital and when.

34. What is your view on the structure of license where MSOs are licensed and LCOs are franchises or agents of MSOs?

This seems to be a reasonable option and ought to be applicable to the majority of cases. It is also possible that a few of the largest single cable operators should be permitted to gain independent licences. These would not strictly speaking be ‘multiple’ system

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operator licences. Lastly, it ought to be possible for geographically contiguous groups of existing single cable operators to associate in an appropriate way in order to jointly apply for MSO licences. In all three cases, the same minimum subscriber figures and/or net worth criteria should apply, as should the same reporting requirements and obligations to respect intellectual property and licence forfeiture conditions.

NDS supported TRAI's own Recommendations on Restructuring of Cable TV Services, as published on 25 July 2008 with minor caveats.

35. What would be the best disclosure scheme that can ensure transparency at all levels?

At a minimum, there ought to be a publicly accessible list of MSOs and LCOs, comparable to the FCC list of cable franchises at: <http://www.fcc.gov/mb/vax/registeredcuid.xls>. Further information such as subscriber counts should also be made available, though arguably this only needs to be made available to other registered or licensed operators and content providers (as appropriate).

36. Should there be a 'basic service' (group of channels) available to all subscribers? What should constitute the 'basic service' that is available to all subscribers?

NDS agrees with the need for a 'basic service', but NDS does not believe that the same 'basic service' should be defined at a national level for all Indian subscribers, given India's broad cultural and linguistic diversity.

Moreover, even in quantitative terms, there are likely to be significant differences in expectations across India, as some cultural and language groups are very well served in terms of channel choice already, whereas others are not so well served.

37. Do you think there is a need for a communication programme to educate LCOs and customers on digitization and addressability to ensure effective participation? If so, what do you suggest?

There is certainly a need for such a programme, but it must not become politicised as the previous CAS programme was, when it was unrealistically 'sold' to the public as a way to reduce cable TV bills.

The emphasis ought instead to be on improving choice and quality of service and building a modern cable TV infrastructure which can be augmented to provide additional services (e.g. but not limited to broadband 'dual play' through the use of two way cable infrastructure and cable modems).

38. Stakeholders are free to raise any other issue that they feel is relevant to the consultation and give their comments thereon.

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Some of NDS's comments in the attached responses to earlier Consultation Papers on Restructuring of Cable TV Services (22 April 2008, 21 July 2008) and on Interconnection Issues Relating to Broadcast and Cable TV Services (23 January 2009) remain relevant.

NDS supported TRAI's own Recommendations on Restructuring of Cable TV Services, as published on 25 July 2008, with minor caveats.

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