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Shri Wasi Ahmad, Advisor (B&CS), TRAI
cc Dr. Rahul Khullar, Chairman, TRAI
cc Shri Rajeev Agrawal, Secretary, TRAI

11 January 2013

NDS Response to Consultation Paper on Issues related to the Interconnection Regulations applicable for Digital Addressable Cable TV Systems & Tariff Order applicable for Addressable Systems

Dear Mr. Ahmad,

NDS, now part of Cisco, welcomes this opportunity to provide a written response to the Consultation Paper on Issues related to amendments to the Interconnection Regulations applicable for Digital Addressable Cable TV Systems & Tariff Order applicable for Addressable Systems.

NDS is the world's leading vendor of digital conditional access and digital rights management systems for pay TV, with its solutions deployed in over 133 million pay TV households on devices including set top boxes (STBs), digital video recorders (DVRs), PCs, mobiles and other multimedia devices. NDS's content and service protection technologies safeguard annual pay TV service revenues exceeding US$50 billion. Many of the world's largest pay TV platforms use NDS conditional access technology including DirecTV (US), BSkyB (UK), Tata-Sky (India), Bharti Airtel (India), Sky Italia, Cablevision (US), Kabel Deutschland (Germany), Shanghai Oriental Cable Network (China) and Shenzhen Topway (China). NDS middleware, which enables a host of advanced services for subscribers and includes pay TV middleware, has been deployed on 226 million devices. NDS is a global leader in digital video recorder (DVR) technology, with over 49 million units deployed. (All deployment figures as at 30 April 2012.)

NDS employs over 2,100 software engineers in its Bangalore research and development campus, working on set top box middleware, interactive applications and digital video recorder software for over 50% of NDS's worldwide customers.

NDS's customers in India include Hathway Cable and Datacom, DEN, GTPL, Darsh Digital and JAK Communications for digital cable solutions and Tata-Sky and Bharti Airtel for DTH solutions.

NDS technology is providing an enhanced TV viewing experience in over 20 million homes in India today, enabling a compelling, next-generation TV experience for over 100 million viewers, based on an average five people per household. With offices in Delhi and Mumbai and a recently opened state-of-the-art, 330,000 square foot research and development campus in Bangalore, NDS has invested heavily in India over the past 12 years and has gained a market share of over 40% in digital pay-TV technologies in India.

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NDS is thus a major 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 2002. NDS's responses presented here are consistent with its responses to a range of well over 20 TRAI consultations over the past nine years.

In particular, NDS has consistently recommended that TRAI construct a light regulatory framework that promotes and enhances competition between platform operators and platform types (DTH, cable, IPTV etc), to enable each to compete fairly on its own merits.

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 further discussion on these recommendations.

Yours sincerely

Paul Jackson
Chief Engineer
NDS Asia Pacific Ltd.

Issues for Consultation

A. Issues related to amendments to the Interconnection Regulations applicable for Digital Addressable Cable TV Systems.

Carriage fee

(1) Whether the following proviso should be introduced in the clause 3(2) of the interconnection regulations for DAS and the clause 3(5) of interconnection Regulation for DAS should be deleted.

"provided that the provisions of this sub-regulation shall not apply in the case of a multi-system operator, who seeks signals of a particular TV channel from a broadcaster, while at the same time demanding carriage fee for carrying that channel on its distribution platform.".

This appears to be a housekeeping measure to tidy up the regulations and make them more consistent across all types of addressable platform and as such, NDS supports it.

(2) If no, the reasons thereof.

Not applicable.

Minimum Channel Carrying Capacity of 500 Channels for MSOs

(3) Whether there is a need to specify certain minimum channel carrying capacity for the MSOs in the interconnection regulations for DAS.

Due primarily to the already and increasingly competitive digital pay TV environment in India, with cable, DTH, fixed line IPTV available and wireless IPTV launches on the horizon, NDS does not see the need to specify a minimum channel carrying capacity in the interconnection regulations.

Other reasons why NDS does not recommend this include:

a) the number of licensed channels available is continuously upwardly moving target
b) requiring a minimum number of channels may in certain cases only encourage use of lower bit rates per channel, resulting in a lowering of video and audio quality
c) the proportion of high definition channels is another upwardly moving parameter, reducing the relevance of a target number of standard definition channels
d) the use of advanced encoding and modulation technologies (e.g. H.264 / MPEG-4 AVC and DVB-C2) in future and continuing firmware/software improvements in existing encoding and modulation systems will allow more channels of a given definition and transmission quality in the same cable infrastructure over time
e) with all the above constantly changing, any regulation would quickly be outdated or require ever more complex clarifications starting almost immediately after issue

Overall, NDS believes that operators know better than regulators what trade-off between capacity, cost, choice, resolution and transmission quality their customers will find most agreeable as they have most to gain by getting it right and most to lose by getting it wrong.

(4) If yes, what should be the different categories (example cities/town/rural area) of areas for which minimum channel carrying capacity should be prescribed and what would the capacity for each category.

Not applicable.

Operators in the various cities/towns/rural areas know better than regulators what trade-off between choice, resolution and transmission quality their own customers will find most agreeable as they have most to gain by getting it right and most to lose by getting it wrong.

Placement Fee

(5) Whether there is a need for regulating the placement fee in all the Digital Addressable Systems. If so, how it should be regulated. The stakeholders are requested to submit their comments with justifications.

The position consistently held by NDS and communicated to TRAI over many years is that there is no need for the regulation of either placement fees or of pay channel pricing.

B. Issues related to amendments to the Tariff Order applicable for Addressable Systems.

Twin conditions at retail level

(6) The stakeholders are requested offer their comments on the following twin conditions, to prevent perverse a-la-carte pricing of the pay channels being offered as part of the bouquet(s).

“ a. The ceiling on the a-la-carte rates of pay channels forming part of bouquet(s) which shall not exceed three times the ascribed value# of the pay channel in the bouquet;

b. The a-la-carte rates of pay channels forming part of bouquet(s) shall not exceed two times the a-la carte rate of the channel offered by the broadcaster at wholesale rates for addressable systems.
#**ascribed value** of a pay channels in a bouquet is calculated in the following manner:

1. Proportionate Bouquet Rate for pay channels [A]=
Bouquet Rate x (Sum of a la carte rate of Pay channels)/(Sum of a la carte rate of Pay channels+ Total no of FTA channels x factor*)

2. Ascribed value of a pay channel in a bouquet = [A] x a-la-carte rate of a pay channel/ (sum of a-la-carte rate of all the pay channels)
*factor=1 if uniform rate of free-to-air channel is less than or equal to Rupees three. The factor = uniform rate of free-to-air channel/ 3, if the uniform rate of free-to- air channel is greater than Rupees three.”

The stakeholders are also welcome to submit any other formulation that can achieve the same objective, along with its justification.

NDS does not agree with TRAI's premise that "perverse pricing" of either à-la-carte pay channels or bouquets of pay channels exists on any Indian pay TV platforms, nor that the pricing of one relative to the other requires regulation.

Bundling is an age-old commercial practice in many market sectors, new and old, high tech and low tech etc. For a non-essential service such as privately produced pay TV, the primary purposes of which are entertainment and profit (from which healthy tax revenues accrue to governments), bundling should be permitted without such pricing prescriptions.

Moreover, TRAI's proposed regulations under "Twin conditions at retail level" above and proposal (8) "Freedom to choose the channel(s) on a-la-carte and/or bouquets" will essentially constrain bouquet pricing and bouquet channel line ups, leading to a number of undesirable – albeit presumably unintended – consequences.

There may be at least six undesirable consequences of a shift from selection of content in bouquets to selection of content à la carte, some of which will be experienced immediately and some of which will take time to emerge:

a) Higher complexity of selection and delivery
b) Lower quality of service due to increased mistakes / misunderstandings
c) Higher cost of selection and delivery due to increased complexity, time, mistakes / misunderstandings in selection and delivery (whoever is responsible for them)
d) Lower transparency when comparing packages with family, friends, neighbours
e) Higher cost of certain channels, particularly less universally appealing ones
f) Lower choice of content.

A little more information to support these statements is outlined here:

Supporting a), b), c) Anyone who has seen a sign up form for an à la carte service will agree that it is much more complex, time consuming and error prone than a bundled only service. But there are more complexities arising than just filling in the form and the service provider accurately authorising the channels a subscriber has requested.

Supporting d) It becomes near impossible to compare what rate you are paying with the rate that a neighbour is paying if, say your channel lineup differs by just a few channels.

Supporting d) If subscribers drop channels one month and take up new channels a subsequent month, and if each channel price is set on a different review cycle a set number of months after first subscription to that channel, it becomes virtually impossible for subscribers to keep track of what they should be paying, as the subscription TV component of every monthly bill will differ.

Supporting c) In the scenario outlined immediately above, the cost of providing service to those subscribers increases, to cover the more frequent channel subscription changes.

Supporting e), the following three paragraphs are quoted from *Perils of a la carte pay-TV menu*, an Op-Ed article written by Barney Lane, Economist and Principal with Boston-based global consulting firm Charles River Associates, published in *The Straits Times* in Singapore on 17 December 2010.

"To illustrate this, consider the History channel which is sold today by StarHub in a factual channel bundle along with channels from Discovery, BBC and the National Geographic channel groups.

Bundling in this manner with Discovery, BBC and National Geographic (which have a substantially higher viewership than the History channel) ensures that the History channel is available in all of the homes that subscribe to the factual channel package.

Were the History channel unbundled from this factual channel package, as an unintended consequence of cross-carriage implementation, its price for each home to purchase would rise and its viewership would drop. A 'negative feedback' loop would likely ensue, in which its higher price would discourage take-up necessitating a still higher price. The channel, full of high-quality content, might unfortunately exit the market."

Granted that the "cross-carriage implementation" in Singapore is not relevant to the Indian market, but one effect of unbundling (offering channels à la carte that were previously only offered in bouquets) – whatever the underlying reason for it – would be as described.

Supporting f) Introducing a new channel becomes a Catch-22 situation – why will subscribers pay for it if they haven't seen it; how will they see it if they haven't paid for it? Even if free trials are offered, how is that offer marketed to the subscriber, if not as a free add-on to something else similar (i.e. in a bouquet), or is the whole cost and effort of promotion pushed back to that channel's provider?

Notwithstanding NDS's fundamental disagreements with TRAI on this matter, the formulas proposed seem to be even more complex than before and will thus impede competition by making it harder for pay TV platforms to differentiate their service offerings and experiment or innovate with new offerings and packages.

Moreover, the fixed price of "Rupees three" used in the formula would doubtless need to be revised periodically or else increasingly "perverse pricing" would result as this regulated price would over time bear less and less resemblance to reality.

The ultimate losers will thus be subscribers.

NDS has no other formulation to propose.

Minimum Subscription Period

(7) The stakeholders are requested to offer the comments, if any, on the proposed deletion of the word 'pay' in clause 6 and 6(2) of the principal tariff order dated 21.07.2010.

NDS sees no need to delete the word 'pay' in this clause.

NDS finds it strange that any subscriber would not want to have access to all the free-to-air channels she or he is entitled to and cannot see the point of à la carte selection of free-to-air channels as if they were paid subscription channels.

Methods exist and are widely used in electronic programme guides to enable subscribers voluntarily to limit the availability or presentation of certain channels in their homes, viz.:

a) Parental rating locks – typically allow subscribers to restrict access to certain channels by requiring a correct PIN code or password to be entered by the viewer before accessing the channel
b) Favourite channels – commonly used for both free-to-air and pay TV channels, typically allow subscribers to see a menu on screen comprising programme details of only their self-selected "favourite" channels, avoiding the clutter and distraction of details or listings for other channels they are not interested in or rarely watch.

Offering free-to-air channels as if they were pay TV channels on an à la carte basis needlessly increases costs for the pay TV operator, given that such functionality as described above is available to subscribers for no additional fee and with no need to involve the pay TV operator at all.

Freedom to choose the channel(s) on a-la-carte and/or bouquet(s)

(8) The stakeholders are requested to offer their comments, if any, on the proposed inclusion of the following provision after sub-clause 6(4) in the tariff order dated 21.07.2010, as amended.

"It shall be open to the subscriber of the addressable systems to subscribe to any bouquet(s) or any bouquet(s) and any channel(s)(pay or free to air) or only free to air channels or only pay channels or pay channels and free to air channels".

Notwithstanding NDS's general support for level playing field regulation across all pay TV platforms, this provision may have unfortunate unintended consequences on all such platforms as described in its answer to proposal (6) "Twin conditions at retail level".

Offerings of Bouquet(s) of channels which require special Set Top Boxes (STBs) such as High Definition Television (HDTV) or Three Dimensional Television (3D TV) channels etc.

(9) Whether the channels that require special type of STB be offered only on a-la-carte basis or as part of separate bouquets that consists of only those channels that require a particular type of specialised STB.

In line with its earlier comments, NDS sees no need to regulate bouquet composition. TRAI seems to be most concerned about subscribers without HD capable reception subsidising HD channels for others. To quote again from Barney Lane's op-ed piece: "While undeniably true, this is simply part of the deal: the flip side is that these customers also receive cross-subsidies for channels that they like but others don't. The net result is a wide variety of channels available at market-friendly prices."

It is equally likely that non-HD subscribers to those bouquets are subsidised by HD subscribers to those bouquets that *only* want the HD channels. The bundling is most likely designed to encourage HD adoption. Introduction of HD requires affordable content to be available in order to drive demand and reduce the price of HD reception equipment for all.