



August 21, 2015

RE: DSTAC Proposal Assessment For Tier 2/3 US Cable Operators

TO: The FCC Members of The DSTAC Committee

This letter is intended to shed light on obstacles to implement the two proposals for the downloadable security system for small operators in the United States. The concepts are general, but are backed up by numerous technical details and nuances that are diverse across each operator.

The FCC has defined the term “small operators”, as those who are NOT the “NCTA’s six largest incumbent cable members who serve 86 percent of all cable subscribers” (see section 22 below from FCC 12-126, which authorized cable operators to encrypt basic tier services, but also exempted small operators from requiring they offer a IP enabled device to their subscribers). It should be noted that in this rulemaking, the FCC recognized that requiring small operators to also support IP enabled devices was “not necessary”, and “big operators generally dictate equipment features to manufacturers and commonly get priority in delivery of that equipment”.

The majority of these small operators offer content to their subscribers in three formats:

1. Analog NTSC transport
2. Digital cable (QAM) transport, protected by legacy security
3. TV Everywhere applications, where the subscriber receives IP signals directly from the content provider via the internet, and protected by security that is proprietary to each application.

The NCTA’s six largest incumbent cable members also provide their content in a fourth managed IP format, where IP video content is centrally encoded, and encrypted, and then delivered to subscribers in this common format. Examples of these services are Comcast Xfinity Go, and Time Warner Cable TWC TV.

The first proposal, the “WG3 HTML5 Security APIs” Proposal, abstracts security for applications to run on consumer devices. The abstraction is defined across EME, MSE, and WebCrypto. To meet the requirements of this proposal, there are two scenarios to consider:

1. Consumer device manufacturers must implement a receiver and security plug-in that is compatible with one or more of the formats above. For example, support for Arris DigiCipher or Cisco PowerKey security. or
2. The small cable operator must provide its services in a fourth format, namely IP simulcast

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The DSTAC WG1 has determined that it is unduly burdensome for consumer device manufacturers to create and certify a device that meets the scenario 1 requirements across all MVPDs. In Evolution Digital’s opinion, Scenario 1 is not viable for any MVPD, regardless of size.

The lack of viable consumer device implementation forces each small cable operator to implement IP simulcast (scenario 2) to deliver content according to the “WG3 HTML5 Security APIs” Proposal. IP simulcast is defined here to mean delivery of the DSTAC-agreed-upon video services, including potential application level information, over a direct IP connection through the small cable operator’s access network, through the subscriber’s home network, into a consumer device that implements the client side of the “WG3 HTML5 Security APIs” Proposal.

IP simulcast is unduly burdensome to small cable operators for two reasons:

1. An additional format delivered on the cable operator’s access network will require additional spectrum for that content.
2. An additional format must be created with equipment and processes that are new and separate from the original three formats.

To elaborate on the obstacle of additional spectrum, a small operator has a limited spectrum with which to work on its access network. That spectrum is already completely used to deliver the original three formats, plus broadband Internet access. All small operators are under market pressure to connect subscribers with higher and higher broadband speeds; many of these operators have chosen to eliminate the Analog format to make room for more broadband spectrum.

Since that broadband spectrum is already approaching capacity with competing video services and other high value broadband applications, small operators would be forced to add capacity or reduce services to enable IP simulcast. Adding capacity on a cable plant requires an upgrade of almost every piece of equipment in the access network. This activity is cost prohibitive for all small operators at 10s or 100s of millions of dollars per operator for this wholesale upgrade. Reducing enough services to make room for IP simulcast would affect small operator revenue by 10s or 100s of millions of dollars.

Regarding new equipment and processes, legacy equipment to serve the original three formats is not appropriate to serve modern consumer devices – as proven by a stark lack of consumer device choice for direct connection to any operator network. The equipment and processes required for IP simulcast equate to a new cable plant for each region within an operator. The investment required is 10s of millions of dollars to implement and install, then millions of dollars to support every year.

Based on the size of the business of these small operators, and investment either way of 10s or 100s of millions of dollars is unduly burdensome and would put many of the small operators out of business. Therefore, the “WG3 HTML5 Security APIs” Proposal is unduly



burdensome to small cable operators. If the FCC proceeds with rule-making based on the acceptance of the “WG3 HTML5 Security APIs” Proposal, small cable operators must be given a complete waiver to be able to continue to operate.

The “Virtual Headend System” Proposal, outright requires services to be delivered in IP streams, but suggests that those IP streams could be delivered via the operator access network (cloud) or via the home network through an in-home device or service (local cloud). The cloud delivery is a fourth format and requires IP simulcast, which is proven to be unduly burdensome to small cable operators above.

The local cloud solution has no distinguishable differences from AllVid, which has been rejected by the marketplace and by the US Government for a variety of reasons. Because the local cloud scenario of the “Virtual Headend System” Proposal has been rejected, and because the cloud scenario of the proposal is unduly burdensome, small cable operators must be given a complete waiver if the FCC proceeds with rule-making aligned with the “Virtual Headend System” Proposal.

Evolution Digital is a strong supporter of the small cable operator community, and we know only too well the unique challenges they are facing with aggressive competition from OTT service providers, and the ever increasing costs for programming. Evolution Digital, as a supplier of products and services, hope to help them by providing innovative solutions that can help them transition their networks and CPE devices to IP. However, the economics of rural cable require them to take a more cautious and financially conservative approach.

It is our recommendation that they be excluded from any rulemaking which would unduly burden them to implement IP-based video solutions before they are economically capable of doing so. We believe the FCC has set a precedent in the FCC 12-126 rulemaking, when they exempted small operators from having to support IP enabled devices.

Furthermore, in light of the recent industry consolidation taking place in the MVPD community (Charter acquiring Time Warner Cable and Bright House), we suggest that any rulemaking be limited to the “Top 4 MVPD’s”, who will make up the 86% of all cable subscribers in the US. Namely, Comcast, Charter, Cox, Cablevision.

Sincerely,

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Excerpt from FCC 12-126:

21. We believe that the commitments from the six largest incumbent cable operators will be sufficient to address the compatibility issue concerning IP-enabled devices and achieve the objectives of Section 624A of the Act –i.e., to ensure compatibility between cable service and consumer electronics equipment.⁹⁹ We do not extend the additional equipment requirement to smaller cable operators because we do not believe it is necessary at this time.¹⁰⁰ As noted above, based on the current record, only a small number of consumers rely on IP-enabled devices to access the basic tier and thus we expect this particular compatibility problem to be extremely limited in scope.¹⁰¹ Because the six largest incumbent cable operators subject to the rule serve 86 percent of all cable subscribers nationwide, we expect most consumers that use such devices will have ready access to the necessary equipment.¹⁰² Moreover, large cable operators generally dictate equipment features to manufacturers and commonly get priority in delivery of that equipment.¹⁰³ We anticipate that the large operators' demand for this equipment eventually will lead all equipment to include this functionality in the marketplace, and thus the equipment small cable operators provide will eventually include the IP functionality as well, regardless whether they specify this particular feature.¹⁰⁴ Nonetheless, we may revisit this issue if the equipment market does not develop as expected or if we find that small cable operators do not make their service compatible with these consumer devices.