

**Keynote Remarks of**  
**William T. Lake**  
**Chief, Media Bureau, FCC**  
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Thank you, I'm very happy to be here. I'll try not to be intimidated by looking out over this sea of technical expertise. I'm reminded of President Kennedy's remark, at a dinner honoring Nobel Prize winners, that "this is the most extraordinary collection of talent, of human knowledge, that has ever been gathered together at the White House, with the possible exception of when Thomas Jefferson dined alone." One of the strengths of TV broadcasting is that it has found a way through ATSC to bring so much brainpower to bear on charting the industry's future technical course. I wish you well in your meetings today.

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You appreciate probably more than I that, in this fast-changing media world, no one can stand still; the choice is either to innovate or to be left behind.

ATSC since its founding has been a mechanism of innovation for the broadcast industry, and it is gratifying to see how much it has done in recent years. In particular, I am excited to see ATSC's activity looking

toward development of a new technical standard, ATSC 3.0, and I appreciate the invitation to be with you and to learn from today's presentations.

One had only to look around the floor at the recent NAB Show to see illustrations of how the broadcast industry and ATSC have been innovating. I was able to spend a bit more time on the floor this year than in years past, and it was time well spent.

I was excited to see the rollout of **ATSC 2.0**, giving broadcast TV new capabilities such as non-real-time viewing, triggering, and two-way interactivity – all through an improved standard that is backward-compatible with existing sets.

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Also on display was **Mobile EAS**, which provides a way to enlist the one-to-many architecture of broadcasting to provide viewers additional information beyond just text alerts in times of emergency.

And of course everyone was dazzled by advancements in **ultra high definition** video.

The 4K screens were truly impressive; and the 8K demo seemed better than reality!

And we saw an early demonstration of the ability to provide 4K video over a 6 MHz terrestrial broadcast channel.

**Mobile DTV** seemed to have moved beyond hoopla into the quiet task of serious implementation. It's a credit to ATSC and the industry that the M/H standard was adopted in a remarkably short 2 ½ years.

The **drones** on display at NAB were pretty nifty too – I wanted to take one home. But I suspect that ATSC can't claim a direct role in developing those.

And, though it doesn't show as well in Las Vegas, I can't fail to mention the work that ATSC did in developing and refining the standard on which we based our implementation of the **CALM Act**, to quiet loud commercials. That wasn't the most important thing the Commission did in recent years, but it may have been the most popular!

Together, these steps show that broadcasters get it – they can see that, even if you're headed in the right direction, you'll get run over if you're standing still. That has never been more true than in today's fast-moving media environment.

Most exciting of all for the long-term future of broadcasting is your beginning of work to consider an entirely new technical standard for terrestrial broadcasting. A new broadcast standard would represent a fundamental technology shift that could be the catalyst for new business models and new revenue streams for broadcasters. It could make possible --

Higher data payloads

Broadband interactivity

Personalization of the viewer experience

Premium services

Targeted advertising, and

Varied user behaviors.

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Internet and wireless companies have been exploiting these functionalities for a decade, and broadcasters would benefit from doing so.

Innovation and experimentation should be part of the DNA of broadcasters, as they must be of all other participants in the media world. The TV industry has to evolve to keep pace with constantly changing consumer behaviors and expectations.

Mobility and interactivity are today major drivers for video consumption. These have been largely the domain of wireless

companies, but there is no reason why broadcasters can't offer users greater benefits in those spaces. To compete effectively in offering mobility and interactivity, it seems likely that broadcasters will need a new technical standard. The added capabilities of ATSC 2.0 are a down payment, but the potential benefits of an ATSC 3.0 promise to be far greater. And as 4K displays [[like the one being shown here]] become popular, broadcasters will want to be in the game with a way to deliver 4K video over the air.

Of course, any decision to move to a new standard will be a big decision, and developing that standard will take a lot of hard, sustained work. Those steps are in the first instance for the industry, not the Commission. **Our** formal role will be to consider a rulemaking to bless any new standard that may be brought to us, as we did with the original ATSC standard. But in the meantime, think about what we might do to facilitate your activity in this area.

For example, in February we authorized Sinclair to experiment with OFDM transmission from its station WNUV in Baltimore – an experiment that is going on today. We'll be as interested in the results of that experiment as you will be.

Should the industry be in **any hurry** to explore a new technical standard? I think there are reasons not to let the grass grow under your feet. In a time of convergence, many others will be trying to satisfy the same consumer needs that you want to satisfy. Each competitor will have its advantages and its disadvantages in doing so. Your one-to-many architecture may give you a leg up in meeting some needs. But that advantage is not insuperable, especially if you don't make maximum use of it. Just think of the advantages some of your competitors may have today in offering mobility, interactivity, or the ability to deliver an ultra HD picture. **Your ability** to be an effective player in those areas may depend on whether those in this room develop the technical ways to squeeze the maximum capability out of your architecture and your spectrum. Your competitors aren't waiting around while you think about that.

As President Lincoln said in one of my favorite quotes, “Things may come to those who wait – but only the things left by those who hustle.”

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There is, of course, another tectonic event about to happen for the broadcast industry – the incentive auction that Congress authorized in the Spectrum Act last year.

Many broadcasters expressed an early concern that the incentive auction might interfere with their exploiting innovative and more efficient uses of their spectrum. I think – and hope – we’ve made clear at this point that the contrary is true. Any broadcaster who chooses not to participate in the auction will retain all the rights it would otherwise have to explore innovative uses of its spectrum. And the Spectrum Act, of course, requires the Commission to make all reasonable efforts to preserve the coverage area and population served by TV stations.

We’ve also heard it said that it would be ideal if the repacking that follows the auction could be done at the same time the industry implements a new technical standard. I can see why synchronizing those two activities might have some appeal. But it’s important to recognize that it almost certainly won’t happen.

We’ve set a goal of adopting rules this year and holding the auction in 2014, in order to meet a shortage of spectrum for wireless broadband that is projected to appear as early as 2015. We are in full swing on that project, and we think those target dates are still aggressive but doable.

By contrast, developing and implementing a new technical standard for broadcasting may be a multi-year affair, even with the pedal to the metal. Eleven years passed after the FCC’s Advisory Committee on

Advanced Television Service was established, before the first digital TV stations went on the air. That was a transition from analog to digital, and one can hope that a move from one digital standard to another can be achieved more quickly. But the timeframe will almost certainly be longer than the timeframe we contemplate for the incentive auction.

For this reason, I was pleased to see that Jim Kutzner and his colleagues, in their presentation at NAB, proposed that development of the ATSC 3.0 standard “should proceed independently [of the incentive auction process], at a pace appropriate to technological (and not regulatory) developments.” That seems the right approach to me. There are good reasons why the industry may **not** want to **dawdle** in considering and developing a new standard; but it would be a mistake to think that the process could be collapsed to coincide with the auction and repacking process under the Spectrum Act.

The move to coordinate with activities in other parts of the world through the Future of Broadcast Television organization, while commendable, may be another reason why implementation of a new standard, even if done as quickly as possible, will march to a different drummer than the incentive auction.

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In sum, I applaud your innovative spirit, and we will watch your activities with great interest. I look forward to learning more today about what you're doing. And please let us know if there is more we can do to help or facilitate innovation in this important sector.

Thank you, and I'll be happy to take any questions.