

The DTV Transition in the United States

John McCoskey
Chief Technology Officer
PBS

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Background

- U.S. DTV transition goals
 - Service quality improvement
 - HD television, Surround Sound
 - Multicasting
 - Datacasting
 - Spectrum reclamation: 108 MHz (UHF ch. 52 ~ 69)

U.S. DTV Timeline

6/23/96 First DTV station on-air (WRAL)



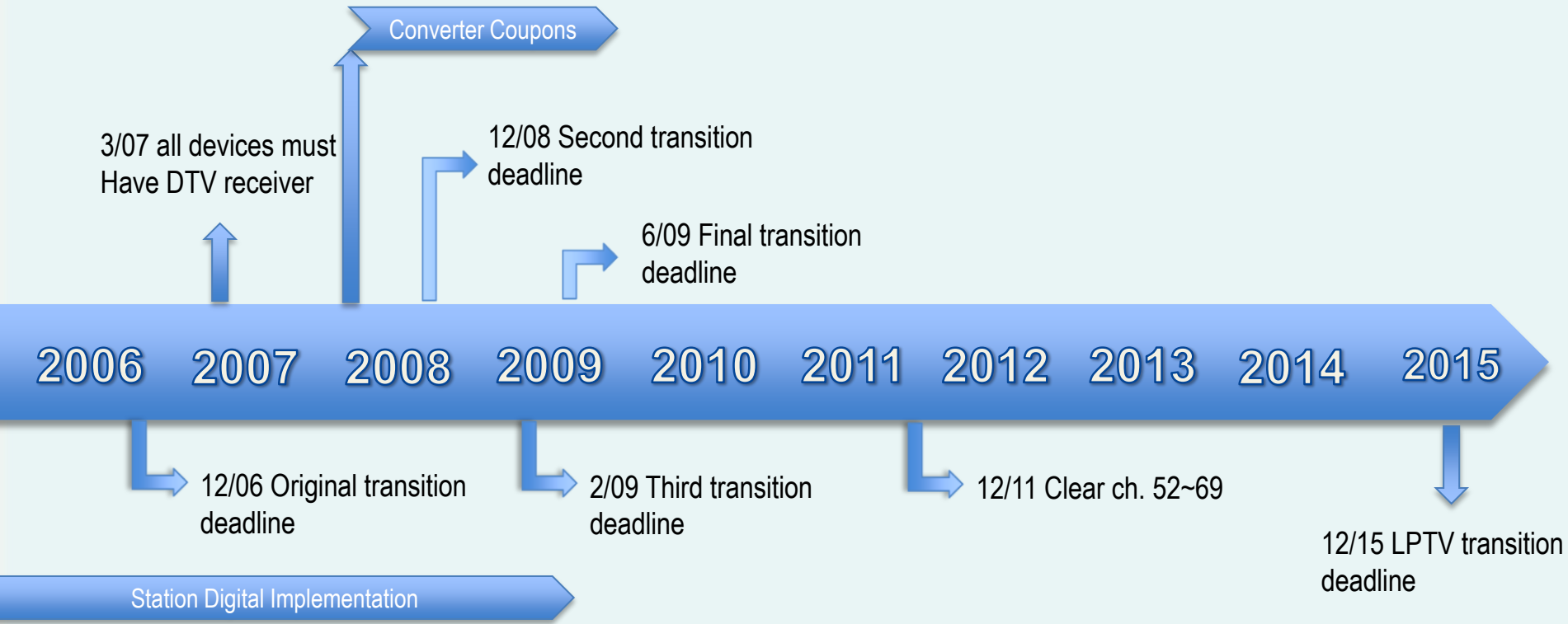
First HD sets available

1996 1997 1998 1999 2000 2001 2002 2003 2004 2005



Telecom Act mandates DTV transition by 2006

Station Digital Implementation



Current Status

- All full-power stations operating on DTV
- Low-power and Translators transition still in progress
- All remaining stations must move out of channels 52-69 by December 21, 2011
- Cable systems must carry local stations in analog until early 2012

Public Television Perspective

- 360 full power stations (~20% of total in U.S.) – every station made the transition
- Actively using multicast channels
- Vital role in community outreach, support and communication about the transition
- Significantly affected by rural translators
- Cost: > US\$2 Billion

Remaining Challenges

- VHF problems (~480 stations post-transition)
- Loss of coverage & receiver cliff effect
- Analog “clean up”
- Limitations of initial ATSC implementations:
 - 8VSB modulation & MPEG-2 encoding
- Translators and LPTV completion
- Battery powered emergency TVs

Remaining Opportunities

- Mobile DTV
- Datacasting
- Advanced emergency alerting
- ATSC 2.0 / next generation services



Lessons Learned

- This is a complex and difficult transition
- VHF remains problematic
- Don't forget about aspect ratio changes
- Public communication cannot be over-done
- Technology advances have already outpaced the DTV standard

On the Horizon

- Finishing the translator transition
- ATSC 2.0 and 3.0
- Mobile DTV
- Mobile & advanced emergency alerting
- White Space unlicensed devices
- Additional spectrum reclamation and repacking

Thank you!

John McCoskey, CTO, Public Broadcasting Service

jsmccoskey@pbs.org

+1.703.739.7504

Twitter: @johnmccoskey

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