DTV Multicasting

The Nuts & Bolts of Making It Happen…
About this session...

- I WILL make you uncomfortable!
- You WILL question my judgment
- Quality is extremely important!
- Content is KING!
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Lakeland Public TV Background

- Small market rural station
- Small dedicated staff (25 FTE w/ 1/3 of staff in news department)
- Limited operating funds ($1.8M)
- Limited # of OTA area broadcasters
- High cable & DBS penetration
- No local service other than us
Why should a small station multicast?

- More choices gives viewers more reasons to tune in
- You can appeal to more than one demographic at a time
- Viewer churn will be less because you can target entire channels at a specific demographic group
- The right kind of channels will help with cable carriage
- Again, quality is important, but content is King!
Lakeland PTV’s Current Multicast

9-1   L-HD    PBS HD Channel
9-2   L-PTV   Analog Simulcast (SD)
9-3   L-Kids  Kids Channel (locally generated SD)
9-4   Create  Create (SD)
9-5   L-Plus  Non-Kids Channel (locally generated SD)
9-6   L-Xtra  MN House & Senate filled out w/Annenberg (SD)
How We Do It…

- HD running 720P
- SD running 640x480
- All channels running one audio per service
- All SDI plant
- High quality encoders and mux
- Statistical multiplexing
- Optimize encoder and mux settings
We can’t multicast because...

- **Small staff... we can’t do any more!**
  - Add a packaged feed like Create or Schedule XD
  - Create your own by time shifting your current channel

- **Limited Technical Infrastructure**
  - Again, use packaged feeds
  - Record an time shift big blocks of your primary channel

- **We won’t compromise quality to multicast**
  - Encoders are improving - you can do more than you think…
  - Keep everything SDI - this helps bit efficiency
  - Stat Muxing really helps
Keep It Simple…

• Eliminate VOs, squeezes, offset events, etc.
• Move from tape to file based playback
• Use packaged feeds
• Record blocks of packaged feed
  – Create a Kids channel from Schedule X
  – Create a Non-kids channel from Schedule X
• Use templates rather than creating daily logs
Create Your Own Kids Channel…

• Use Channels 500 & 501 on-air from 06:00 to 14:00
• Record this 8 hr block & repeat it to fill 24 hrs
• All kids shows we use are standard length 28:46 or 58:46, so all breaks are the same length
• We create packaged breaks 1:14 in length
• We create 4 logs per month - Saturday, Sunday, Monday & Tue-Fri
• Underwriting is sold on a monthly basis
Create Your Own Non-Kids Channel…

- Air channel 543 (XD) from 00:00 to 05:00
- Record channel 543 (XD) from 00:00 to 05:00
- Repeat five hr recording at 05:00 & at 10:00
- At 15:00, play sub-clip of 00:00 five hour recording starting 2 hrs in
- Air channel 543 (XD) 18:00 to 00:00
- Four templates - Saturday, Sunday, M-Th, Friday
- Only local channel branding now is Lakeland bug
- During pledge we crawl a support message
Bandwidth / Quality Concerns...

- Use Stat Muxing -
  - With more channels, stat muxing efficiency increases
- Use higher quality encoders & optimize settings
- Keep everything SDI
  - Cleaner video compresses better
- Content is king, so accept slightly reduced quality in trade for more services
Lakeland’s PID List

QuickTime™ and an Animation decompressor are needed to see this picture.
Where do we go from here??

• As the engineers and operations staff, YOU are the ones to lead the station here
• You know what can and can’t be done
• Get programming and management talking
• Explain to them what’s possible and what’s not
• Be a champion for new services and change
• If you lead, they’ll follow....
Thank You!

- Bill Sanford
- General Manager
- Director of Engineering
- Lakeland Public Television
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