Management of the Aspect Ratio Transition

Or, Wasn’t it Nice When Everything Was 4x3?

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October 20, 2000
The Basic Problem is Flexibility!

(Simulated Pictures)
... But These are the Results if we are not Careful!
The Simplistic Solution; Viewers Object

12.5% top & bottom

12.5% left & right
Although They Will Rent This From the Movie Store!

22% top & bottom at 2.4:1
Perhaps it is an Opportunity?
It Can Get Worse!
And if the Signaling Goes Wrong ...
Some Starting Thoughts ...

- Most legacy programming is 4x3
- Existing 4x3 receivers have no way to cope with different aspect ratios
- Many DTV receivers will be 16x9; most will have some way to cope with different aspect ratios, but the broadcaster may not like the solution!
- HD is 16x9
- Viewers expect 16x9 as part of the DTV experience
Some Choices ...

- Continue to produce in 4x3
  - Consistent look initially
  - Best look on 4x3 receivers
  - No incremental cost
  - No new “DTV Look”
  - Inconsistent look when outside programming is 16x9

- Change production to 16x9
  - Mismatch with legacy programming
  - Best look on 16x9 receivers
  - New “DTV Look”
  - Going to happen eventually! (?)
Or Maybe Mix & Match?

- Can choose look to suit programming
- Confusion, training
- Possibility or live errors
- More equipment
What About 14x9?

- 14x9 is NOT a production standard!
- 14x9 is a way of presenting 16x9 programming on 4x3 receivers
- Programming is produced at 16x9 and used at 16x9 for DTV; the same program is used at 14x9 for NTSC
- Seems to create little viewer reaction
- Usually automatic setting is OK
- Not a dramatic change when switching between 4x3 and 14x9
16x9 DTV; 14x9 NTSC

7% black top & bottom

6% crop left & right
What About Mixed Sources?

- Capability of studio determined mainly by cameras
- If dual aspect ratio operation is needed, buy dual aspect ratio cameras!
- Switcher can operate at 4:3 or 16:9, but not both at once!
- Convert “wrong format” sources to match production
- Convert for “wrong format” distribution at the end
Preferred Model for Dual Aspect Operation

Cameras 4x3 or 16x9

Switcher 4x3 or 16x9

Other Sources

Convert as Required

Convert as Required
Conclusions

- No single answer
- Determine priorities and business objectives
- Suggest stay 4x3 until ready to go 16x9
- Consider 14x9 for NTSC transmission of 16x9 programs
- Avoid multiple aspect ratio operation if possible