50 HD Channels and Nothing to Record?

(umm, not likely)
High def debuts in the form of digital TV broadcasts

- Early receivers convert broadcasts to analog, then transferred them via analog connectors to HDTVs
- Recording options: D-VHS, HD PVR and Home Theater PC
Restrictions? Not many

Sporadic use of CGMS-A, such as by HBO
Enter Blu-Ray…

In 2003, Sony begins selling Blu-Ray recorder with built-in satellite receiver for Japanese market
But Don’t Hold Your Breath

• No packaged media available, so only use is for recording Japanese satellite broadcasts
• Release in U.S. delayed, pending completion of the specs for pre-recorded media
• Key concern: enough protection against piracy to satisfy Hollywood
Meanwhile, Broadcast Flag arrives
Mandate effective July ‘05

• FCC goal is simple: bar the redistribution of over-the-air TV shows onto the Internet
• In theory, the rule should have zero effect on copying in the home
• In practice, however, the rule touches every device in the digital TV signal path
So what?

Everything connected digitally to a DTV receiver must bar Internet redistribution

- All discs must be encrypted
- All digital connectors must be scrambled
Potential Pitfalls

Incompatibility among protection schemes
• My PVR won’t talk to my disc recorder!
• My discs won’t play at the office!

Loss of fair-use privileges
• I recorded the video of Tommy’s touchdown from the local sports broadcast, but I can’t e-mail it to Grandma
Appeals Court Reverses

• D.C. Circuit rules that FCC overstepped its authority, throws out broadcast flag rule two months before it was to take effect
• Hollywood is now pushing Congress to empower the FCC to reinstate the rule
Arrival of high-def home video

Initial form, D-VHS, was DOA, in part for lack of studio support

Beginning early in 2006, two camps: Blu-Ray and HD DVD

Same core copy protection used by both

Main difference: Blu-Ray machines more able to reject counterfeit or pirated discs
“Glass half full” view

• For the first time, studios capable of allowing a limited number of back-up copies of pre-recorded discs
• AACS is flexible enough to allow recording of excerpts, other fair uses
• Studios can pre-load additional, locked movies which could be copied onto separate discs
Download-to-Own

• Coming to conventional DVD this fall, possibly, to Movielink and other outlets – after DVD CCA approves CSS for DVD+/-R
• AACS spec already exists for recordable media
• Bandwidth hurdle
  Studios could use highly compressed formats (low-data-rate versions of AVC or VC-1) for downloadable HD movies
• Irrational fear of the Internet
  It’s no more risky to put an encrypted file on a server online than it is to put it in every Blockbuster
Mavericks

- HDNet
  Mark Cuban hates copy protection
- BitTorrent
  Indie filmmakers using p2p outlets to distribute works outside the studio system
- New advertising-supported business models that put a premium on widest possible distribution
Homemade HD

• When 50” screens become the norm, standard definition just isn’t good enough
• Driven by advances in chip power, hard drive capacity
• But camcorders will take advantage of AVC, VC-1, potentially squeezing HD pictures enough to deliver them on conventional DVDs