



The Effect of the Coming Market Upheaval on STB Energy Use

By Thomas Bolioli, Terra Novum

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Disclaimer

- I am here not to represent a client but myself
- The views expressed are my own and not those of any client or clients I may work for
- This panel is about the future and as such, the views expressed are subject to change...

Traditional MSO market

- Can be found 12 miles north in La Brea with the other dinosaurs
 - BTW, that's 55 min travel time in LA traffic.
- Most MSOs have begun to accept this, though not all

Strange Bedfellows and Agents of Change

- Sling Media bought by Echostar and Echostar “splits” from Dish
- Cisco broke the ice by snapping up Scientific Atlanta early on
- Motorola's STB unit (Motorola Mobility) bought by Google
- Comcast and NBC tied the knot
- Time Warner kept it’ s cable division despite shedding AOL
- Microsoft, Intel and AMD are heavily involved behind the scenes selling their ICs and software among other strategy plays
- Where does Disney and Redstone go from here?

Step Away from the STB and Everyone Will Win

- MSOs will need to relax control over the hardware Ecosystem
 - Whether it's the FCC or the market driving it, they won't have a choice
 - This doesn't mean they have to give up control on content (RVU)
- STBs will no longer be a distinct market
- There will be a gateway device that feeds misc CE devices around the home. TVs, thin clients, iPads, iPhones, Tabs, Windows Media Extenders, Game Consoles etc.
- Got Raspberry Pi?
Hobbyist custom
STBs for \$25-\$100 in parts and a 4 watt power envelope. Will there be software and content for them?



What Does this Mean for Energy Efficiency?

- The Good: Content consuming devices will be smaller, less power consuming and can shut off when not being used.
- The Bad: There will be more of them; A lot more and more devices will be used at the same time (second, third, nth screens)
- The Ugly: These devices will be amorphous, taking all sorts of shapes, sizes and functional combinations. A single specification will have trouble classifying all these devices into one class. Also, some of these will be significant energy consumers.
 - See ENERGY STAR Game Console Specification...
- All things considered, the good should likely offset the bad and the ugly

What Does this Look Like Today?

- Motorola Dream Gallery, Xfinity, Apple iTunes Store
- iPad/tablet apps from TNT, ABC, NBC and others
- XBox Live, XBox as an extender, NHL Gamecenter (Sunday Ticket without the lock-in)
- AKA; Over The Top



Where Do We Go From Here?

- International harmonization of test procedures and classifications/program structure
- Incentive programs need to drive change in the right direction
- This means targeting the problems, not the solutions with incentives
 - Too often well intentioned incentives/regulation dictate solutions instead of targeting problems
- STB test procedures need to be modular to be used by other standards for other CE devices
- Ultimately, we are chasing something that is moving and changing very fast
 - Ever try catching a slippery frog?

What Prize is Behind Door Number 1 Chuck?

- Traditional incentive programs will miss the mark because the mark is moving too fast
- Traditional incentive programs can devolve too quickly into free ridership
- Utilities and those running incentive programs have to think outside the box
- X-Prize as a model?

One small STB, one giant leap for incentives

- The X-prize reward is a \$10mil prize for non government backed reusable space vehicles
- Lindbergh flew to Europe to claim the Orteig prize under similar “first to market” rules
- Highly targeted incentives designed to fix a narrow but significant problem are best

Why Winner Takes All?

- Rewards change makers and not coattail riders
- More importantly, it ends the incentive before free riding kicks in
- This is important because it is no longer a matter of “if” efficiency will be introduced (ENERGY STAR did a great job here), but “when” these features will be introduced

Why Do President Tyler's Grandkids Matter?

- President Tyler (1841-1845) was born in 1790 but he has not one, but two, grandchildren alive 220 years later
- Tyler had his last child in 1853 @ age 63
- That child then fathered his last two children @ ages 71 and 75
- Both of those children are alive today
- Had Tyler and his two sons had children in their 20's, there would be 4 more generations of progeny
- Tyler will eventually have great, great, great grand children, it's just a matter of when

Home-Economics 101

- The historical oddity of President Tyler's progeny illustrates compound interest, or the lack thereof
- The faster you realize savings, the greater the total savings are realized in the future
- The reverse holds true too. The slower you realize savings, the less long term savings will be realized

Compounding Savings

Incentive	Start	Year 1	Year 2	Year 3	Year 4	Year 5
BAU	0%	5%	10%	25%	35%	50%
Light	0%	10%	20%	35%	50%	75%
Moderate	0%	15%	35%	50%	75%	100%
Heavy	0%	25%	50%	75%	100%	100%

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Moderate	0%	15%	35%	50%	75%	100%
Heavy	0%	25%	50%	75%	100%	100%

- By targeting incentives early on, you can realize early and deeper gains
 - The lifespan of these devices at the rental level is 7 years
 - But in a sales model, these devices inhabit secondary markets for much longer
- Change will happen naturally
- Note the diminishing rate of return on late term incentive payments

Conclusions

Incentive programs need to...

- Move much faster and more nimble
- Target narrow issues with each incentive
- Target them early in the cycle
- Integrate STB testing in various CE device specs
- Prevent free riding