

What is TV?

Reading Jonathon Spira's [post](#) (also his [essay](#)) on Dave Faber's list made me think about the larger question of what is TV.

I've been using my Google TV (GTV) since I got it (a week ago?? Whenever)

The important question it raises is "what is TV".

GTV is interesting but you can also bring the video into a PC with products like Microsoft's Media Center or just by running apps like Netflix on the PC where it runs far better than the Android app they did. In fact this note caused me to try Netflix on the PC and unlike Flash apps it can stay full screen on side window while I do work with my main window. I also have a Mac Mini which I use as the "TV" source for my treadmill screen but I generally just Hulu or Amazon content.

One difference is that GTV is a small box that has a nice form factor but without the full array of PC apps. GTV also seems to have done a better job in handling the IR controls. They use RF instead of IR for the remote control and then seem to take advantage of the fact that the device is connected to power so they can use a very bright IR rather than line of sight but I'm not sure. The downside is that the remote control – a keyboard is clunky.

So let's separate out a few factors:

- GTV is a dedicated device for the TV. This follows the trend of dedicated routers even though you can use ICS (Internet Connection Sharing – a NET) which comes free in every PC
- GTV is another platform for developers. Seems like Netflix is still more devoted to the PC than Android but is willing to do a per platform approach as in taking full advantage of Silverlight (to do full screen) on the PC while having a native version for Android. This is a reasonable strategy for premier apps. But the GTV version is indeed lame. There's also a WP7 version which is more reasonable. Still waiting for an Android phone version.
- In addition to Netflix on the GTV you can get HBOGO (full interface – same as PC), Amazon (full capabilities too) and a number of others as well as the Chrome browser.
- No surprise that GTV does YouTube using a native application that takes full advantage of the platform. It puts YouTube in a position to

challenge traditional TV. In fact I just discovered "leanback" which may be an attempt to make YouTube more like TV in that I can just let it play and not make choices every few minutes.

- The sore thumb here is the legacy (AKA, ghost from the past) set top box which lacks an API for control of the streams. I happen to have FiOS so that the boxes themselves are on the network and get both analog streams over RG-6 and streams over IP which it then converts to HDMI. But the TV also has an Ethernet interface and is programmable and can take streams over IP. The STB is the essential part of the bad experience with all this.
- I have remote control apps on my Android phone. One is from Verizon which has all the limitations of a traditional remote control and has to be on the "right IP network". I also have the software version of the Logitech Harmony remote control. While it is better, neither takes advantage of being an additional screen. Instead of PIP (Picture in Picture) I want to preview (or just view) content on the handheld screen. But this may be due to the STB being a central source and its content is only available as a single video stream. This means another source of EPG (Electronic Program Guide) information – to the extent that TV Grid guides remain relevant.
- Lots of missing pieces though you can find them. For example why not just stream from my PC to a large TV screen. You can buy the stuff to do it but the market has not gelled. Why? Because ...
- There are protocols ([DLNA](#) (Digital Living Network Alliance), Media Center, etc) for streaming from my PC (or Mac) to my TV. There are also various "Media Center" apps to serve content from the PCs. There are also media servers on NAS devices. I don't know which use what protocols. There are also communities with their own protocols for content over networks.
- Apple has its own TV product. Judging from <http://reviews.cnet.com/apple-tv-review> it's well done but is not really an open platform. My sense is that TV is going to be more than the iPod experience as people finds creative

users for the display surface and local interaction.

- Remember that Microsoft's Xbox is another contender here. It's already positioned as a media player but, alas, Microsoft is not doing as much as it can to attract developers and experimentation. I like Microsoft's development tools so find it frustrating that Microsoft is moving to a siloed business model rather playing to its strength as a platform providers.
- Other boxes are coming but the business is not in the box itself which is a commodity. It's in the relationships built around the box and adding value using the box. A third party app on GTV helps Google even if Google isn't getting paid. At least as long as Google makes it up in other ways.
- My Samsung TV also has software inside of it. My STB has widgets too. Intel is now trying to advertise that Intel is inside TVs (and they are inside the GTV). Putting a closed OS in a TV or any OS inside a TV shows no software chops. Adding twitter and Facebook to an old TV isn't
- It's one thing to throw away an iMac to get a bigger screen but a 52" TV? A separate box allows for rapid evolution/innovation. But that said we still see a plethora of HDMI, RGB, Composite, VGA, USB, Display Port, DVI, Ethernet etc etc connectors. Those will have to go away in favor of a network interface and a video networking protocol over 10GB Ethernet or, for a while, an HDMI cable.
- There is also the new [Flexview](#) from Verizon which seems to be attempting to compete with Netflix.
- There are also codec fights and HTML5 and ...

Maybe the battle is over what is TV more than how does the current business model continue.

That business model is currently tied to the grid and controlled distribution. There is also the "cable" business which is a mixture of brokered content and OTA (Over the Air) content being carried as per the old community antenna model mixed with must carry rules and spats with Fox about how to feed things through the STB. But the STB is dead and the software is beyond the design point of the box and is buggy. Yet the STB continues to be the chokepoint. But that is changing as "TV Anywhere" allows the broker model to extend to over-IP (or Over the Top).

The major part of the business model is indeed bundles be it the old "don't change that dial" model of broadcast net-

works or the newer cable subscription model. It is not really a la carte as the shows on basic cable depend on being part of the bundle such as a newspaper is a whole and not just the parts.

There are experiments like Hulu that take the existing content and repurpose it (like DVDs did). With HuluPlus the experiment continues. I do notice that while plus gets me more content I still get commercials (ads) though often the slots are unsold. The content (AKA TV shows) are often edited to remove content that isn't allowed to be repurposed in particular ways and whole swaths of content are missing due to contract limitations – all the middle seasons of Saturday Night Live aren't on H+.

So if you have a sense that all this is in flux you're right. The Fox spat with Cablevision seems to be positioning for this world or maybe the old world. Content providers that said fine to Hulu are now getting cold feet and then try to control content availability – how can Hulu use what. And then there's Hulu itself getting spooked because there's an x86 device running Android rather than PC or Mac which would do the same thing under a TV.

And we haven't even finished legacy battles? Why are there DVRs in STBs when you can do the same thing with the content cached at the head end? Ask the lawyers. And you don't even seem to own what you have recorded – it's got DRM and can be unrecorded. And DRM ... oy ...

So this is all the retro concept of the television grid now repacked into salable DVDs or iTunes or Amazon apps or Netflix or VHS or ... anyway to make a buck with controlled availability and packaging and ... we're still just beginning to take advantage of content on small screens.

What's ahead? Not quite sure what it is but part of the TV experience is letting something else do the choosing – a channel or a VJ or whatever so this could be very interesting. Leanback is one step in this direction. We might also see "long form" content on YouTube.

Can we reinvent that experience with new degrees of freedom? Kids have multiple screens going all at once – is integrating it all on one surface the right bet?

What about a rich sports experience?

What about ... well there is so much more.

And there is where GTV, new form factor PCs etc. come to the fore. Supposedly the GTV SDK will be available in January ...

Right now the battle is framed in terms of who owns the customer – will the TV (Samsung), an ad broker (Google) or a content source (networks) or a content broker (Cable

companies) or a remix or will they just be part of a bigger picture.

And in the middle of this is a Federal Speech Commission? I can understand the FTC but why the FCC? Once upon a time we thought it had to manage our content experience because it assumed that meaning was an inherent property of the transport. Perhaps the biggest part of this is shaking off the legacy that has forced us into the television grid based on naïve idea of using frequencies to divvy up the wireless space thus creating the scarcity of distribution capacity that defines today's concept of television.

So what is this thing we call TV? And how will we fund high cost content without scarcity to channel the money into a small number of pockets?

It's not just about "television":

I noticed that the Digital Living Network Alliance is asking for \$10,000 to join and you have to pay to read the guidelines. It reminds me of IEEE-1394 (Firewire) which died because it defined the protocol in the wire. We've seen a similar problem with UPnP which over-defined the solution. But this is nothing new – back in 1997 I tried to [argue](#) for open interfaces but just as the old guard of the TV industry is trying to maintain their old business model the appliance manufacturers see the future in terms of the past.

There is also the desire to own more of the value chain thus building smarts into the TV itself to get more value than merely selling a commodity TV. In fact a TV as a device need be nothing more than a generic screen with an input signal. I typically just use a computer monitor these days. For some reason we still require a TV has a tuner for picking up over the air signals even though few people do so. If you want a tuner you can buy one as a small USB accessory these days so why build it in at all?

Tuner is such a strange word – dates back to the days of radios and dials as we tune in faint signals from afar. It's a concept so disconnected from today's notion of just typing in a URL. But for those making policy TV may still be what they remember with a dial and channels.

This is why the whole "digital TV conversion" mandated by congress was so crazy and clueless. The argument is that there was a need to free up spectrum for other purposes but all it did was annoy people. We don't need to free up "spectrum" as I've [explained](#). We just need to shift the funding model of telecom. The sad part is all that expense and effort could've gone into providing generic bi-direction connectivity (AKA "Internet") with TV content is just part of the mix.

But what would require rethinking what we mean by "TV".

Et tu Mobile?

"Mobile" is another backward-looking category as we attempt to take the wide open opportunity of small portable general purpose connected platforms and try to treat the market as little more than fancy telephones. We see parallels with as Apple tries to control the platform, Google's Android opens it up for experimentation and Microsoft siloing what should be a very open device. Why do I need to get approved by Apple or Microsoft in order to write software for my own phone! Oh, it's not really mine – I just paid for it.

OK, this has been fun for me and gave me a lot to think about. I learn by writing ... and have lots more to mull than I can capture here.