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The (Re) Evolution of Broadband Digital Audio

IP Broadband Audio – impact to date, and into the future

Although digital audio has been possible for a while (e.g. VoIP, DAB, IP streaming), a spate of recent developments over the last 2 – 3 years has shifted the landscape significantly. Principally, these are (i) The increasing penetration of xDSL broadband (bandwidth allowing reasonable quality audio to be guaranteed), (ii) the use of peer-to-peer and other web client based technologies, and (iii) the increasing convergence of fixed/mobile technologies. This has already driven some major changes to established industries:

- A rapid rise in VoIP adoption.
- Music – initially available in dial up services, its popularity started with Napster and then peer to peer (P2P) networks. Music over IP has grown rapidly since about 2002.
- Radio over IP has started to grow fairly rapidly over the last 3 years.

Most recently, the phenomenal growth in the use of portable, personal digital media players (MP3 players, and more recently Apple's iPod) has added the mobile element to digital audio. Combined with the Broadband Internet and the "Blogging" mindset ("Blogging" – amateur text publishing over the internet) has led to a new type of broadcasting to mobile devices (iPods), hence "Podcasting". According to some, this is just the beginning of the impact of the broadband audio disruption - Broadcast Radio, 3G Mobile Telephony and broadcast based advertising are all said to be in line for major change.

Podcasting is one of the technologies being driven by what is called "Web 2.0", i.e. the evolution of the World Wide Web from a largely text and picture based medium where users have to seek information via search portals, to a multimedia service where the information is sought for the user via rich metadata. Whether Web 2.0 is just another piece of hype, a genuine step forward or just a continuation of the development of the web is unclear. Understanding Podcasting is important, however, not just as it is a potentially disruptive technology in its own right (Radio is an £20bn+ industry globally after all), but also because:

- It is one of the most visible of the services being driven by the changes to the way the World Wide web and the Internet operate, loosely described as Web 2.0
- The structure of the audio industry is similar to that of the much larger video industry, so lessons learned here will be applicable to video as bandwidth increases.

PodCasting has a number of features in common with other disruptive IP media technologies, in that it:

- is capable of time shifting, ie allows listening when the customer wants it
- allows ad shifting (avoiding unwanted adverts)
- is global - access is via the global Internet, not the radio station or satellite.
- is user-programmable, ie the customer selects the content they want – drives the move away from pre-selected, more mainstream content

It is also potentially more disruptive than other IP based audio, as the technology it uses is:

- a fixed/mobile convergent technology, allowing portability
- using new push type software that potentially allows each user to aggregate the content of their choice, disrupting the portal industry.

Podcasting also has a number of impacts on the legal and regulatory framework in that:

- it is by and large an unregulated medium, so a “Wild West” environment is likely in the early days
- status of rights, royalties and other copyright mechanisms will no doubt be tested to the limits

Podcasting – A brief overview

In brief, it works by creating or digitizing content into an audio standard (eg MP3), and using the RSS (Really Simple Syndication) standard to transmit content over the Internet to a customer’s PC. That PC uses “Podcatcher” software to find, store and play the audio “Podshow”. It can also transfer the podcast to a mobile device. Customers search generic or specialized websites to download the content onto the PC, and onto the Pod.

Podcasting was initially named by the early blogging enthusiasts using new technologies to broadcast over IP to Apple’s iPod. Podcasting is now the generic term that describes using PC or mobile personal players to download and store audio broadcasts, initially music and increasingly other types of audio such as radio, audiobooks etc, and has spawned a new grass roots “podcasting” industry like web publishing and blogging did before it.

Figure 1 overleaf shows the main technologies used in the Podcasting supply chain stream, and their approximate costs of acquisition and use.

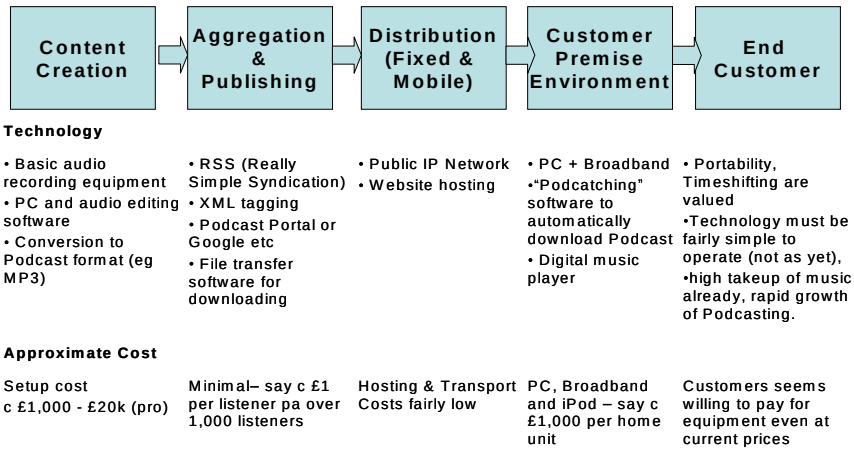

Figure 1 – Podcasting Supply Chain – Technology and Economics

Is Podcasting really a Disruptive Technology?

Just as Blogging has made journalists of previously ordinary people, will Podcasting make us all talk show hosts and media personalities? Will this damage the business models of the more established audio industries?

Podcasting has one of the fastest rates of adoption of a new consumer technology ever, even the name shows the disruption…the term Podcasting coming from Apple's iPod, which burst on the scene from nowhere in 2003, sales rising 600% in one year. It is the integration of the Blogging mindset, the personal digital media player, and broadband Internet penetration. Please consider this:

- The number of "Blog Sites" has risen from a few thousand in 2002 to c 60m in 2005
- Apple shipped 6.2 million iPods in Q2 2005 for $1.1 bn – a 600% increase from 2004
- In the US, c 22m people own an iPod/MP3, 29% of them have used Podcasts. That represents a c 5% penetration of total population.
- There were 526 Google hits for "podcasts" on September 30 2004, then 2,750 three days later. The number doubled every few days, passing 100,000 by October 18. After only nine months, a search for "podcasts" produced more than 10 million hits, and as of September 2005, the same search produces 61 million hits.

Blogging, VoIP, and now Podcasting, are considered to be some of the most visible parts of the move to "Web 2.0" – the real time, fully interactive, grid enabled, broadband internet.

Web 2.0

Just what Web 2.0 is exactly is in flux owing to continual new developments. By and large, however, Web 2.0 defines a number of key trends:

- Increasing use of freeware, open source and shareware to build applications

- Increasing use of client side “applets” rather than server side “portals” to create services
- Use of “Social networking” approaches (rating, recommendation) replacing 3rd party editing and publishing
- Move from static to dynamic content – blogging is not only more real-time than a website, but encourages a larger feedback loop
- Increasing use of self defined web services
- Increasing user participation in content selection and definition – trends identified in the first “Web 2.0” conference this year were moves from publishing to participation, and from content management systems to wikis (user generated and edited) directories
- Defined taxonomy to user defined tagging ("folksonomy")
- A move from trying to ensure “stickiness” to facilitating syndication

Whether Web 2.0 is really a “new new” thing or just a grown up Internet is unclear, but some lessons from the Internet remain remarkably constant. Many of the new features of the Web are driven simply by bandwidth and penetration increase, and some of the underlying behavior has stayed remarkably constant over the last 10 years, as Figure 2 illustrates

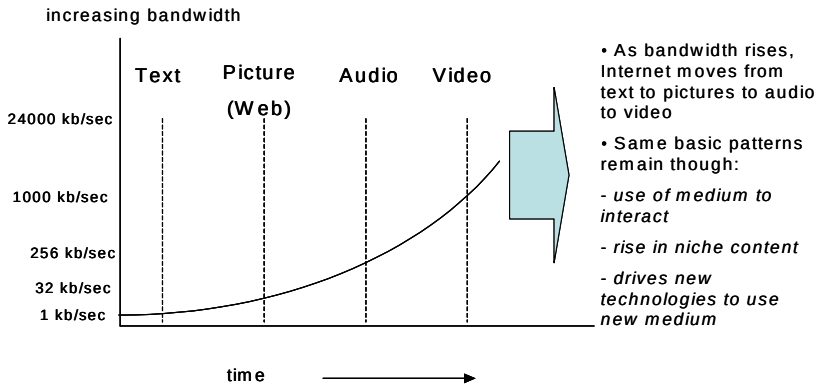

Figure 2 – Lessons from Internet Adoption as bandwidth increases

Impact on existing audio businesses

From basic text in the early 90’s through the evolution of the Web, Blogging, and now Audio, a pattern emerges across the supply chain of the Internet’s propensity to:

- The medium is used to connect people with common interests, across national and global boundaries.
- This drives a rise in the consumption of less popular niche content – the “fat tail”. As transaction costs fall, so smaller communities of interest can be served with even more unique content…drives a rise of niche yet global communities.
- Unlock creative talent among “enthusiastic amateurs” globally to serve this demand. A wealth of new content emerges…..and often illegal redistribution of existing material if copyright or access restrictions are onerous.

- Drive entirely new aggregation and publishing businesses, frequently produced by smaller, new players capable of rapid growth…. eg Yahoo, Google, Skype.

This leads to a number of assaults on the existing businesses once a "tipping point" of usage is reached:

- The 'Net attacks existing distribution networks with its (usually) more effective digital packet switched technology (anyone remember SNA, ISDN….)
- It attacks existing end-to-end channels with a lower net cost technology. The continual evolution of simple, open standards, (RSS - Really Simple Syndication in Podcasting's case), typically drives continuing cost reductions as well as driving increasingly merged multimedia capabilities.
- The combination of lower cost technology and ease of distribution drives lower transaction cost, which allows 'Net based technologies to attack established business models.
- Advertising assumptions that usually underpin most traditional media are altered, thus impacting the business models.

The net effect is one of both directly challenging, and of unbundling, traditional players' business models (the in-word was disintermediation in the 90's) to the extent that new players can enter into parts or all of the supply chain to challenge them.
The major issue in the early days for any incumbent is that the new models often have negative impacts on their business, before any money is made per se – making it hard to justify entering the new market early. Soon, however, the new service appears in strength, competing with traditional media for the time, wallet and mindspace of consumers everywhere. Skype (and VoiP in general) is a very recent example.

Impact on Video
There is also a strong possibility that the Audio world will provide a prediction for the impact of broadband on the Video world. This is partly because (i) the Audio world is adhering to the patterns of the previous IP based communications mediums (text, web), but also that (ii) the structure of the audio industry bears a strong resemblance to that of the video market. In fact, early peer-to-peer DVD copying is occurring in imitation of the impact on music. Thus, the lessons honed by entrants in Audio may well be used later in the Video markets.

But will it really happen – we've been here before, after all?
To be truly disruptive however, a technology must radically change the status quo, create anarchy in the existing industries and supply chains, and turn old advantages into liabilities. It must be able to destroy large incumbents and create new giants. It must change the way people live and companies do business, and create shocks in the regulatory and legal frameworks. Can Podcasting really do all this? Looking at previous technologies that have proven themselves to be genuinely disruptive, a number of general principles can be drawn:

- Good enoughs - the technology must offer a significant improvement over existing "good enoughs" to be attractive to all but "early adopters".
- Ease of Use - It must have features that allow it to be easily and rapidly adopted by the majority of end users. Ideally the end user already has the components, or

can be persuaded to acquire them – failing that; they have to be given them by the operators.

- Significantly undermines existing business models used by the major current players, or it will merely be absorbed by them, rather than spawning new companies.
- Sustainable business model of its own that allow it to in and of itself out of its early adoption stage, or else it will not gain external funding or momentum.
- It is not enough to attack just one part of the supply chain; it must threaten multiple areas to make assimilation difficult (and entrance by outside players attractive).

Taking these in order:

Sufficiently better than "Good Enoughs"?

Existing "good enough's" are the current audio services offered. There is significant evidence from previous rapid technology adoption that communication facilitation, portability, ad-shifting, time-shifting and lower costs are constantly attractive to users. Recent research suggest audiences do not like the amount of advertising on radio, want to shut up the endless rap of disc jockeys, and would like to have a larger say in the content. This is mainly US data admittedly, but the UK is not usually too different.

The time shifting issue has already raised its head in the Video industry via TiVo and other Personal Video Recorders, and it's hard to believe that a similar Audio effect will not occur, but it is unclear to what extent it will penetrate as audio tends to be consumed as a "wallpaper" to other activities, so ads are not as intrusive. There is also emerging evidence that audiences do not like the bland "common denominator" programming that radio stations – Business Week recently reported that listeners are increasingly tired of homogeneous radio programming, as there is little uniqueness. What is unclear is how much interactivity is valued, but most experiments have shown that interactivity is attractive, even if its just of the "have your say" variety.

Easily adopted by end users?

The more that the new technology can make use of existing infrastructure, typically the faster it's rate of introduction will be. Podcasting uses a lot of existing infrastructure, and Indications so far are that it is growing rapidly. However, two barriers still stand in its way to mass adoption: Is it easy to set up and use? Not yet…tech-savvy early adopters can do it, but our experience from more mass-market customers is that they still find it hard to set Podcasting up. It still needs a transfer from PC to Pod that means effort…and the mass market does not like effort. Who manages the Metadata? One of the reasons iTunes has been so successful is that the database is easily searchable using a fairly simple tagging system, and uses a format common across the music industry (CDDB).

[In fact, herein lays a tale…CDDB were originally a shared resource that went commercial after acquisition. This has so enraged the developer community that a new freeware standard – FreeDB – is now being built by music enthusiasts globally]. It is not clear what audiences Podcasting will eventually reach - the whole radio listening public, or just niches? Will it be aural wallpaper for people on the move (ie more likely competing with other music products), or listened to more intently, allowing other voice

based services? Figure 3 gives one view of potential application areas – in theory the lower right hand square - low competition, high popularity is the best place to be.

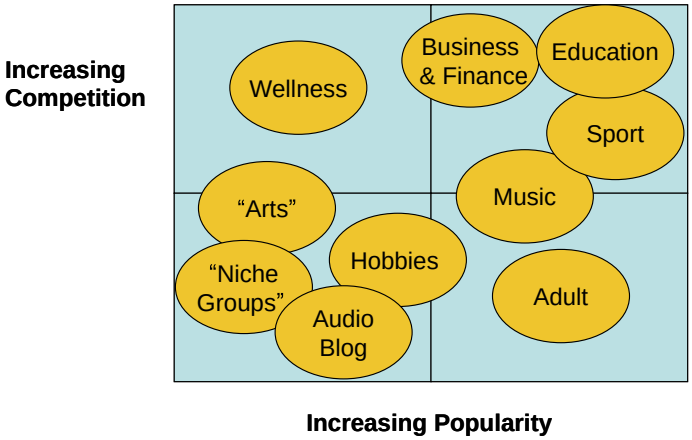

Figure 3 – Potential usage of Podcasting (Source – Verkata LLC)

Undermines Existing Business Models?

The figure below is a simplified representation of the media supply chain, showing the major functional areas and the impact of Podcasting on them. As the diagram shows, digital audio is impacting across the value chain. Principal dislocations shown in purple: It is interesting to look at potential impacts along the supply chain from content production to consumption to understand where the major disruptions are occurring, and what the knock-on (and knock-back) effects potentially are. Figure 4 below describes the impact of Podcasting along the digital supply chain.

Today's Media				
Talent is by and large contracted by large Distributors	Aggregators/ Publishers aimed at large audiences. Usually advert supported	Aggregators/ Publishers are often also media Distributors	Many (DAB, 3G) require new funding by customers (and some subsidy by supplier)	Customer is assumed to be a mass consumer" in most business models
Challenges				
• Low cost of new content creation frees new talent • Narrowcasting, rather than broad appeal content. • Repurposing of existing content is easy	• Ability and Tools to aggregate and publish not owned by incumbents • Podcasting is capable of "narrow" casting, as well as broadcasting • Hard to enforce rights of existing content owners	• Distribution relies largely on existing IP broadband networks, not DAB, 3G mobile • Technologies used in Podcasting are low cost, typically open standard freeware	• Customer buys equipment, no subsidy necessary • Simple to set up, no "truck roll" to customer site necessary	• Hard to stop "adshifting" • It is hard to stop content circulating illegally among users

Figure 4 – Impact of Podcasting on Media Supply Chain

Podcasting thus has a number of common areas that are potential causes of major disruption across the supply chain.

- *Content Creation* – The sourcing of the conception, design and production of the content. The main dislocation is the rise of new creators, using low cost modern technology to bypass the current industry structure. The lesson of the Web and Blogging is that this will occur in the Audio space, mainly "narrowcasting" to distinct interest groups.
- *Content Aggregation and Publishing* – The process of sourcing, selecting, marketing, and rights management of the content, also the billing of the content itself. The rise of new technologies gives an opportunity for new aggregators to reach their new audiences, at the expense of existing players. These can be legal newcomers, typically smaller startups or entrants from other industries, or illegal operations such as peer-to-peer networks. There is also a lack of existing tagging/metadata leaving the field open to new sequencers. In addition, Podcasting seems to be driving systems that aggregate at a user, rather than publisher level.
- *Distribution* – The method of transforming and transporting the content to the end user, and any separate billing for the transport if applicable. The fundamental

shift here is using broadband IP to bypass 3G mobile, DAB, Cable media, traditional telephony and hardcopy methods (eg CDs, Audiocassettes)

- *Customer Premise Environment* – The iPod, PSP, PC, Mobile Phone and potentially PDA can all do some combination of communication roles, all can do Audio, and it may increase the utility and attractiveness of one method over another, tipping current behaviours in new directions. To be multimedia capability, they all seem to need the PC and broadband connection – which plays to the IP networks hand.

A Sustainable Business Model of its own?

Digital Audio has a number of potential impacts on this value chain. It is clearly already:

- Capturing New Users
- Shifting the role of Advertising in the value chain

In addition, it clearly reduces setup costs of an audio broadcast service.

- It is not paying for audio spectrum, 3G licences or cable buildout
- The basic technology required is much cheaper than most broadcasting technologies used today
- Low cost of user subsidy – the user buys the "Podman" and computer, it does not seem necessary to give them a set top box of any sort.
- Similarly, there is no "truck roll" to set up the systems From a CAPEX point of view, the main impact is that Podcasting uses standard Internet/ Hosting infrastructure, so is less likely to require ongoing specialised infrastructure spending, thus again impacting its overall competitiveness. However, to make money Podcasting still has to show it can increase revenues from today's low (near zero) base, and reduce churn when the next "new new" thing comes along. Options being experimented with today are:
- *Advertising* – Virgin has advertising in its Podcast service, and Yahoo has tried 30 second clips every so often on its Radio service. Most pundits believe that advertising has to be narrowcast to the user to succeed. There is even a view that advertising will have to "nanocast" to tiny niches to work. However, others feel that users will not have the inclination to download an advert and then upload it to their player.
- *Sponsorship* – along with advertising this was the staple of early commercial radio and is being tried, for e.g. Volvo on Autoblog. Again, sponsor probably needs to be correct for the niche.
- *Subscription* –many hope that podcast audiences will follow the subscription model, but its early days. The history of the 'net so far is that unless people deeply desire the content, subscription is unlikely to take off.
- *Micropayments* – may websites, blogsites etc already allow voluntary donations via Paypal, it remains to be seen whether users will actually pay for content.
- *Subsidy* – the BBC already puts a lot of content onto podcasts, and this is subsidised via listener's fees. Other companies will be tempted to podcast for

free, hoping to collect benefits via higher customer capture levels for other services, increased “stickiness”, or just the marketing benefit of looking “cool”.

Some even believe that it will have to appeal to extremely small audiences to work, ie to “nanocast”: "Nanocasting aims to deliver programming profitably to very small but highly interested audiences. Using radio effectively in nano markets requires very different strategies and opens the door to programming that would have been unthinkable and unsustainable under the broadcast model" (International Nanocasting Alliance, 2005)

The future of Podcasting – Three Possible Scenarios

One way to look at the possible disruptive outcome over the next few years is to describe scenarios of what may occur, and then look at what one needs to believe for those scenarios to come about. For the purposes of this study we look at 3 possible scenarios – Absorption, Assimilation and Assassination. They are sketches rather than fully worked through scenarios, but they should give some food for thought.

- *Absorption* – Podcasting technology is absorbed by the current industry to create new services and add to existing ones.
- *Assimilation* – the technology allows a number of new companies to emerge with new services, and they join the industry sector serving the customer base. There is some reduction in the prospects of the existing players, but no threat to their existence
- *Assassination* – the technology not only allows new companies to emerge, but their business models destroy value for existing companies and they take large amounts of customers (and spend) away from them.

In all these scenarios we assume an early growth phase occurs, with early adopters taking up the new services warts and all. The issue is what occurs at the “tipping point” - the point at which the service can potentially jump into the mass market (typically about 10% of all users, ie the US situation fairly shortly).

Absorption Scenario

Podcasting software becomes simpler, and it jumps out of the “early adopter” market as large numbers of people start to use it as a new way of accessing content - driven by friends’ recommendation and viral marketing. This starts a blooming of small, creative, content producers and new stars are born – some to become new media favourites, many to burn out shortly after.

In the early days there is much hand wringing as traditional companies’ audiences dwindle, but the spend fails to move away as fast. Some existing companies take to the new medium – Waterstone’s Podbooks service (bought as a small start-up) rivals Apple’s iTunes, catching Amazon on the hop. However, customers show that they are fairly unwilling to pay much money for many of these new services, and any attempt to make them pay leads to rapid migration to other emerging free services - the industry has few barriers to entry so a new service is always opening up, taking customers from existing ones.

In this scenario, absorption occurs in a number of ways. Large portals such as Google and Yahoo use their portal strength to reproduce the emerging new services, even in some cases to buy them. Commercial broadcasters put a large amount of their content

onto Podcasts for free initially, later becoming advert supported (subscription only works for adult, business and horoscopes).

Microsoft reproduces many of the basic Pod technologies in the next Windows release. In the UK, the BBC gets behind Podcasting in a large way, and because it is largely free it becomes hard for any small commercial undertakings to make any money, prompting angry letters to the Regulator, the CBI and the Times. Initially, advertisers are downbeat as users embrace the new technology to avoid any "message from their sponsors", but slowly start to use the more focussed nature of the service to "narrowcast" their messages. In the early days this leads to some interesting results as podverts aimed at more urbane European audiences are taken up by more conservative people in Asia and the US.

The music industry continues to struggle with piracy, but method pioneered by players such as iTunes prove to be the way forward for music Podcast as well, and piracy slowly reduces as a major threat. By 2010, Digital Audio is a multi-media service offered by most of the existing players in the value chain, Podcasting is one part of it. Some of today's companies have done a bit better out of it, some a bit worse, but otherwise its business as usual.

Assimilation Scenario

The start of Digital Audio looks much like it does for the Absorption scenario, but even in the early days a number of other underlying trends become apparent: Customers are willing to pay for small downloads and subscribe to specialist services, and revenue leaks away from existing services such as ringtones as Podcasting is the "new new" thing. Advertisers rapidly adapt to narrowcasting, and even "nanocasting" This monetization allows the many new content creators and services to stay independent and attract new talent, and increasingly Venture Capitalists are attracted to funding new businesses in the area, generating a boom in exciting new content. Young people drop spending on mobile services such as ringtones, and the mobile is relegated again to a mainly comms device, as the broadband content is consumed via the new Podman products coming out.

There is a movement away from Web surfing as a recreation of choice towards consumption of audio material as people find the "audio wallpaper" allows them to get on with other tasks. The IPO of a pod metadata business starts a mini rush of funding into the sector as VC herd behaviour re-emerges. This investment allows some small companies to rapidly grow to (un)sustainable size, but sidelining existing Portals in the audio (and later video) space and adding further disruption into the market. Every household already has a PC/WiFi environment so podcasting becomes a major way of taking audio content, especially for the younger members of the family.

There is huge pressure on regulators worldwide, as claims of piracy, offensiveness and corruption of minors from the new media are rampant. The BBC, under pressure both for wasting UK taxpayers' money to serve customers across the world, and for spoiling the UK market for innovative podcast companies, reduces its efforts – further increasing the space for new players. By 2010 a new order has emerged, a number of new champions have barged their way into the market, some have burned out – taking existing competitors with them – and the telecoms industry has seen a fall in usage of its proposed IPTV and 3G services. Major portals have taken a blow – but not a mortal one – and eBay has bought PodCo as a strategic move.

Assassination Scenario

This scenario starts off much like the Assimilation scenario, and the established industry is reluctantly accepting the brash newcomers muscling in and grabbing some of the pie, when 3 other events occur. VoiP growth has driven a major rise in low cost WiFi pickup points, where users can access the 'net for their calls in a near-mobile way. Emerging metadata tagging means Podcasting is the de facto way of sending any audio "clip" up to about 30 minutes in length. There is a technical change to the "PodPhone", which can now receive text and audio…and send it back. Podtexting, Podmail and Podcalls become the new Unified Messaging Service, initially for the teens and "twenty-something's", and a number of (well funded) new companies rush to market to exploit this trend.

A new service is released, where gamers can talk to each other while playing, and send Podcasts of guidance to other players. This drives the creation of an entire new set of services based around multimedia services via a much more user-friendly device than the PC, which captures a huge amount of the time – and spend – of many of the core spenders for existing services as well as many women who up till now have not really participated in the "on-line" world. The main content houses find that the cost of re-formatting their content to the new interactive media format is very high, delay doing so, and are thus put into head to head competition with new content creators. While their marketing muscle helps, the emergence of automated pull based EPG's means users can find lesser-known content they desire fairly easily on the web without any intermediaries.

Simultaneously the rise in illegal P2P video file sharing impacts revenues, and the formation of an industry consortium, iVid, is too late to stop the decline. DAB is put on ice as it becomes clear that the UK will take its digital radio via PCs and cheap pod devices hooked up to the net. The net impact is major disruption across the industry supply chain. Existing businesses revenue streams decline while costs of customer retention rocket, and the huge amount of money sitting in the VC and private equity markets is released to fund the upstart industries. PodCo's MediaPortal becomes the clear winner in the multimedia navigation stakes, and its user recommendation model proves superior to any search-based model. Existing Portals' valuations fall by an order of magnitude as it becomes clear that search is no longer an intermediary's role for audio and video content. The mobile industry is badly impacted when it becomes clear that much of the broadband audio and video service expansion will pass it by.

A closing view

Knowing that prediction is risky (especially about the future) nonetheless it seems that based on the evidence so far the Assassination scenario is less likely than the other two. This is not to say it is not possible, just that events that probably need to occur have not done so - yet. From past experience, the response of the current players will determine how much time and market space the Assimilation scenario has to play out - ignoring the emerging technology is more likely to bring it about. Have the current players learned their lessons from the past? Some are embracing Podcasting, others are ignoring it.

What is very likely to be true is that the Podcasting industry will cause a number of shocks to some big name existing players, create some new household names - both as broadcast stars and as new companies - and generate a lot of media attention in the

process. This will make it attractive to the younger set who will migrate away from the current “cool stuff” (e.g. ringtones), leaving a number of sub-sectors facing decline.

This potentially suggests that one outcome is an eventual Absorption scenario, but at higher prices as the existing players buy up emerging yet valuable Podcast companies at Assimilation level maturity – and prices. What is very likely is that Podcasting will ask some searching questions about the legal and regulatory environments under which media currently operates, and force some uncomfortable changes to the status quo in these areas.

Issues highlighted on this paper during a round table with senior industry leaders were:

- The role of advertising, and how will branding work
- What are the other emerging links in the Web 2.0 infrastructure
- Is IP audio really a way of looking at the coming IP video market
- What is the target market
- Does mobile have a role or will it be overtaken?
- Are the scenarios realistic, what other possible outcomes are there?
- And possibly most important – is there a viable business model?

Here are some notes from the background research on these topics:

Advertising - For the first six months of 2005, Internet ad revenues reached $5.8 billion; a new record and a 26% increase over the first half of 2004, according to the Interactive Advertising Bureau and PricewaterhouseCoopers. Search and rich media advertising saw notable gains, increasing 27% and 26% respectively in that same period.

The Cable industry is showing that on demand viewing is fragmenting rapidly, and traditional advertising is taking more and more money to reach the same number of people. In IP audio little use is made of the micropayment or subscription model as yet, sponsorship seems to be the early model best adapted to it. In video, customers are not really interested in any form of advertising on demand, advertorials etc unless they are subsidized. What does seem to be working is advertising that is relevant to users of the content.

What are other emerging linkages in Web 2.0?

There is still a lot of hype (to put it mildly), author Steven "Emergence" Johnson saying "The difference between this Web 2.0 model and the previous one is directly equivalent to the difference between a rain forest and a desert." The early linkages that are appearing are termed “mash-ups” and tend to be integrations of existing services with new technologies. There is a huge amount of experimentation occurring, for example, the following is logged on industry monitor TechCrunch: “AnalyGIS, in partnership with SRC, has developed a proof-of-concept application that combines the features of SRC’s Allocate demographics engine and Google Maps.” No doubt most will fail, but some are bound to succeed in such a Darwinian evolutionary stew.

Audio as a predictor of Video evolution

There is a nice analogy used in a recent Forrester report on the Video market, that industries under threat undergo the same five stages that the late Elisabeth Kubler-Ross

identified in her epochal work On Death and Dying. (Lessons From The Music Industry - What Kubler-Ross Can Teach Us About Business) These stages are: shock and denial, anger, bargaining, depression, and acceptance. The report shows how the Audio industry is now moving to (reluctant) acceptance, but the analogy implies that Video is still largely in the shock and denial stage.

Are the Scenarios realistic?
There were arguments during the dinner in favour of all three outcomes; the key issue was felt to be which of the business models would work. What is instructive to my mind is that while we were writing the paper, Rupert Murdoch called many of his senior people together for a major workshop on the impact of the new technologies, so clearly some major industry players are taking it all seriously.

What is the role of Mobile?
The role of 3G is very unclear, as although ringtones have done very well, the economics of downloading large amounts of rich content are at present unattractive compared to using fixed connections and then transferring it onto an iPod or some such device. Much has been promised for WiFi, WiMax et al, but the last 3 years have been underwhelming in terms of any takeup outside of the local area network market.

What is the Target Market for Podcasting and IP Video?
One of the interesting discussions was on how we all used audio, and I took away two main impressions - (i) the more complex the content, the less it can be used as “audio wallpaper”, and (ii) we all liked different things, but were worried about how to find “our” valued content in a world of dross.

Another interesting evolution has been the emergence of the band "Arctic Monkeys" - they have just signed formal record deals worth c £1.7m. What's interesting is that they mostly bypassed the traditional channels, essentially distributing their songs via their website (as podcasts among other media) pre any recording contract, and building up a national fan base without traditional promotion of any sort – and without having to give away any IP ownership early to a record company. Apparently by the time they signed their deal they were in a far stronger position than most new bands usually are.

Is there a viable business model?

This is still unclear, but there is evidence that it is certainly shaking up existing models. Rupert Murdoch, as quoted in Fortune this month, illustrates this: "When you've got a big, expanding world economy, you'd expect a boom in advertising, and it hasn't been there" Even as traditional ad sales failed to boom, he says small in-house websites like Foxnews.com and Britain's Times Online started generating meaningful revenue on puny investments. "You start putting two and two together, and we decided to abandon our defences and get offensive." As we were preparing this paper, Sky bid £211m for Easynet, and eBay bid $4bn for Skype. Game on……

About Gerbsman Partners

Gerbsman Partners has, for the last 3 years, analyzed and observed the US market and has continuously perceived the US market as trailing the European market by 16-18 months. As market conditions are rapidly changing with the incremental resolution of network compatibility issues, the European advantage still remains. What had been 16-18 months ahead just one year ago has now seen development times cut in half to

perhaps nine months today. If you, as a European mobile service company, maintain a strategy to enter the US market, the window of opportunity still remains and might do so for another 6-9 months.

About the Author:
Tony Fish , a Gerbsman Partner's member of Board of Intellectual Capital, has been involved for over 18 years in the mobile, wireless, telecom and satellite industries, and has been associated with hi-tech since his first IPO in 1994. Tony has a wide and extensive personal network and arranges regular senior exec networking meetings, on the back of his book –"OpenGardens, the innovators guide to mobile data". Tony divides his time between his non-exec roles and some board advisory work. Tony is known for his probing questioning, clear decision making, simple no-nonsense attitude and robust financial views and controls. Tony has an excellent grasp of strategic and economic issues relating to TMT businesses, their growth and survival and brings an innovative flare to deal making, executing merger and acquisitions and fund raising. Additional contributions by Alan Patrick and Sam Sethi. For more info, visit www.amfventures.com

Gerbsman Partners is a financial restructuring and private investment banking firm specializing in assisting emerging growth, middle market, under-capitalized, under-valued, and under-performing companies and their Intellectual Property maximize enterprise value.

Gerbsman Partners has developed significant domain expertise in the wireless and mobile content area and has assisted numerous companies develop and execute their strategic, operational, financial and financing strategy action plans.

Gerbsman Partners, founded in 1980, has been involved in over $ 1.9 billion of financings, M&A transactions and balance sheet and financial restructurings. Gerbsman Partners has offices and strategic alliances in North America, Europe and Israel. www.gerbsmanpartners.com

