

Formats. What Napster Really Needs

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This article has taken me a combined 20 years of broadcast and computer experience to compile and I couldn't be more excited about the possibilities the Internet can bring now that we have witnessed the cultural change from the traditional broadcast models to the Peer to Peer networking model technologies such as Napster and Gnutella have shown us.

Ever since I was fifteen years old, I have found myself tinkering with communications technology and subsequently using it to communicate. Mostly in the form of Broadcasting.

Although many know me from my seven and a half years on air at MTV, I have always been and always will be a radio guy. The fun of radio is that you (usually) are in total control of your creative process.

As a disk jockey you are constantly working the technology; cueing records, jingles, commercials etc, which can be put under the header "Content Management".

Part of this process is also determining what I would say (station id's, promotions, song/artist info as well as maintaining the interactive feedback loop; live phone calls with listeners.

On top of all this the diskjockey is expected to create smooth transitions between all elements by controlling the mixing board, firing the right elements at the right time and logging each event in the station log, to ensure sales has a record of the spots played and ASCAP/BMI type organizations know who's song was played in order to transfer appropriate funds (but that's for another article!)

When I first started working at pirate radio stations in Amsterdam in the late 70's - early 80's, this process was pretty much manual; we played vinyl records, that needed cueing up on quickstart record players, jingles were stored on "endless loop" 8-track cartridges (known as "Carts"). Logs were paper based and patching a phonecall through often consisted of contortionist tricks even Nixon's secretary couldn't perform.

Over the years radio has become significantly more sophisticated, with CD players that allow instant cue and "chained" cart machines that automatically fire the next "element" in the spot list to complete digital disk based systems such as Dalet that enable you to "script" a playlist of elements including songs, commercials, jingles/station ID's and in some cases of very lazy jocks I know, even the disk-jockey banter in-between.

The value of the diskjockey mostly appeals to users in a local community setting, since local time/weather/traffic are the most important known elements for all radio stations as well as news and events.

The mp3 compression scheme enabled easy transfer of formerly large data files across even the narrowband Internet. Napster gave us a platform for propagating the music in such a manner that I am completely convinced literally every song known to modern man is available in mp3 form somewhere out there on a hard drive in the "MP3-Space". Peer to Peer technologies like Napster, Gnutella, Freenet, Kazaa, Konspire etc etc. have forever ensured that the music is findable and retrievable. All you really need to do is perform one search query across all P2P file storage systems and you are presented with multiple options for downloading the desired song.

Ever since CD-ROM drives could play audio CD's, players have included "Playlists". Basic single-tree outlines that played music in sequence as defined by the user, or if desired, at random with features such as repeat (once).

Unfortunately even the hottest P2P file (mp3) sharing technologies haven't brought us much further than the personal playlist functionality for our modern "Play Out Systems" like WinAmp and other media players.

Unbeknownst to most listeners, radio DJ's almost NEVER compile their own playlists. Logistically this is important, because one DJ could choose to end his set or show with Madonna's "Holiday" while the next DJ had scheduled that as the first song in his playlist. Separation is an issue at the playout system level.

There is however another layer in the (broadcasting) chain:

Formats.

Formats are the magical element in virtually every product or service, it is what mankind uses to differentiate themselves. McDonalds has a great fast food format, closely replicated by Burger King, but never quite the same, and judging from their burgers, they both provide similar content, but perhaps from different suppliers and in turn their burgers contain scriptable formats, differing in order, elements and texture.

Back to our radio station example. The highest paid executives at radio stations (after some notorious airtalent) are the program director and music director. These two functions work closely together to determine the exact format of the station and what content they will fill the format with.

Some example formats are Contemporary Hit Radio (CHR) which many equate to "Top 40" Album Oriented Rock (AOR) is another popular format as is the now increasingly popular MIX format (60's 70's and 80'). These are just a few and new formats such as Alternative Rock and EDGE are appearing all the time.

In essence all radio formats are based over time, typically in 60 minute increments in turn subdivided into quarter hours.

If one looks at these Clock based Formats as a sequence, you immediately notice the playlist like structure. Each hour starts off with a station ID, followed by a Top3 hit --> Station ID --> Recurrent hit (usually 3-5 years old) --> Jock

Banter/Contest tease or promo --> commercials --> Station ID --> Time/Temp --> New Release etc etc etc.

I view these elements as boxes, to be filled in from the known content pool, which resides in the stations' library (digitally as with the Dalet system). This "filling of the boxes" occurs based on a certain rule-set, usually created and maintained by the format creator. In our radio station example the main box categories are defined across all known content (Top 40 hit, New Release, Golden Oldie etc) along with meta tags very similar to the ID3 specification: think of tags like Genre, Artists, Uptempo, Ballad, Group, Solo etc.

The trick is to subsequently fill in the boxes while abiding to the rules, such as separation, but also "clash-rules" so we don't play too many ballads back to back or to female performers in the same situation. (According to our format example at least!)

Ever since DOS based Personal Computer systems, almost every serious commercial radio station worldwide uses a form of scheduling program. The most famous in the radio industry being Selector from RCS Systems. They deliver all the tools and the content database (including tags) for every radio station to create and maintain their own format.

Hopefully this isn't confusing you too much, but if it is, think of Shanaia Twain, she is what we in the industry call a "cross-over artist". The content that is a Shanaia Twain song, happens to fit into many different formats. Those include Top 40, Country, MIX, and even Dance formats. So you probably know ST if you listen to a TOP40 format, but have no clue who Kenny Chesney is, but probably know Garth Brooks. This is what formatting is all about: Presenting a variety of content in an appealing order and "flow".

I know that the use of the word "flow" is somewhat ambiguous, but then again, I view the creation and maintenance (tweaking) of formats as a creative talent, one that must be backed up by experience, knowledge, research and close interaction with the audience.

This holds true for other formats, such as your local deli or supermarket. There is an absolute reasoning behind the placement of products and flow of shoppers. Try walking into any department chain and take pictures of the store. Guaranteed security will kick you out in a nanosecond. They don't want anyone copying their format!!

Ofcourse the beauty of a format is that it isn't copyable, replicable to a certain extent perhaps, but a format can change slightly with just a little tweaking and ofcourse there's always the content supply. That's why McDonalds serves Coke and Burger King Pepsi (granted, there're are many forces at work there, but you get the point.)

So how does all this apply to Napster and the general problems with the music "industry"?

Well, I firmly believe that consumer enjoyment of broadband will really take off when we have influence on our favorite formats, both from the format side as well as the content side.

This is what TiVo saw and is taking advantage of. Your personal Digital video recorder creates a content pool that you like and enables you to format it as you wish. The obvious drawbacks are that there are no pre-defined formats to work with other than those offered by the available broadcasters, which is also the limitation to the content pool.

So take Napster, with most all music in the world (soon to be) digitized in mp3 files ubiquitously available thanks to P2P technologies. Taking a known format that you feel comfortable with (Let's use Top 40) and allowing the format to act as a framework for your playlist. This way you have a built in surprise factor. If the format calls for a female Top 40 artist, you may hear Madonna one time and Jennifer Lopez the next, since they both "fit the box".

The real sweet stuff comes in when you as a user are able to tweak the format, perhaps I just don't want any news at all, then I could simply eliminate that box from my format. Likewise I could set a rule stating that I never want to hear Madonna. It truly will become "My Radio Station".

What I like about the box model as well is that it is a perfect vehicle to introduce commerce based on fair value at the individual level. I may wish to receive news once every two hours according to my format. I can open the box and make it available for new providers to drop content into it (interesting subscription model there!) in exchange for information from me, or perhaps they will in turn track my use of their news format to enhance my experience with their content. If I don't like what they are delivering to me or am unhappy with the relationship for any other reason, I simply close access to my news box for that content party.

To me this is Personal Profiling the way it should be; where the power lies with the consumer, and is based on fair exchange relationships with content and format providers.

I'm no programmer, but I know enough about XML to have a feeling that this language is probably the right way to go for creating Formats. I have followed Dave Winer's development of Userland for several years now, and really got excited by his latest offering Radio Userland, which enables creation, publishing and aggregating of playlists through his outlining software and XML.

Of course Radio is only one example of a functioning Format - Playlist - Playout system. It works for any service or product.

MP3s are a good place to start because we already have an addressable content pool with a reasonable naming space (Napster, Gnutella etc)

ID3 tags already provide meta information that XML based apps can then format and send to a playout system.

What is missing is an open content meta-tag database that stores everyone's information when they drop any content item into the "Ocean". Of course the incentive will be there, since proper tagging and naming will enable successful searches when boxes need to be filled. Once the box is filled, a copy has been locally stored on that users' machine and therefore has propagated by factor one, making two instances available in the content ocean. (if that user is a part of a P2P network)

Currently one of the companies I am involved with United Resources of Jamby is working on solving exactly these issues. An open content/tags database however is something that needs to be opensource and available to all format creators and content producers as well as those who make PlayOut systems such as Radio Userland, WinAmp and RealMedia.

I think some excellent work was done on RSS by both Userland and Netscape and hope that someone will pick up where they left off in their content syndication effort, since this is the key to successful growth of personalized content consumption.