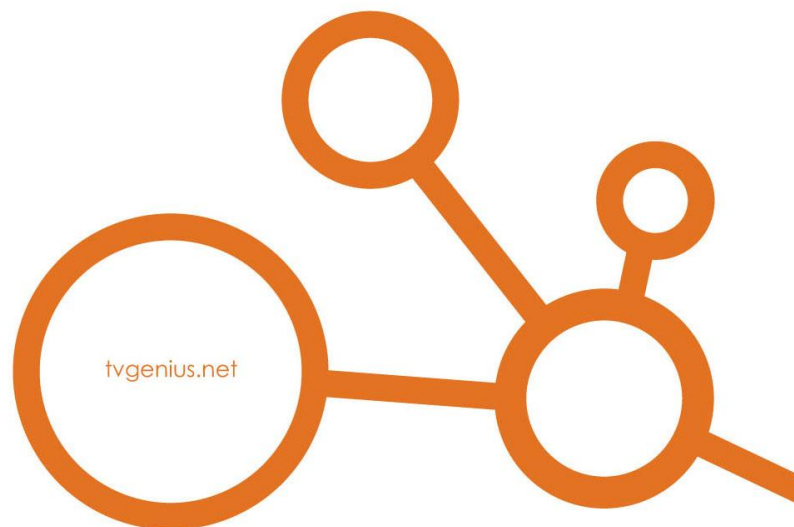




Recommended Viewing: Approaches to promoting on-demand programming



Introduction

An explosion of channels and video-on-demand options has enormously expanded the choice of television programming available, but this increase in choice has not necessarily resulted in an increase in viewing. The problem is a paradox. It seems that the greater choice we have, the more likely we are to stick to what we know best.

The difficulty for viewers lies in discovering new programmes. For the service provider the challenge is to promote programmes that people will want to watch. This white paper explores how service providers can offer more choices that are relevant to viewers, and increase the value of their programming proposition, improving revenues and customer loyalty.

The problem of choice

Consider a typical supermarket with tens of thousands of products lines, and dozens of different varieties. Wandering the aisles we are presented with enormous choice, but still find it difficult to decide what to buy for dinner. As a result we frequently fall back on regular favourites, week after week. We are creatures of habit and brands must invest huge marketing budgets trying to change those habits.

Contrast this with a restaurant, browsing a menu of several dozen tempting alternatives as proposed by the chef, possibly with some specials of the day. We might still have some difficulty deciding what to choose, but the choice is limited. Perhaps we will pick something we have not had before, or we may select something we already know, but we will generally find something to our taste and may well be pleasantly surprised.

Television channels similarly constrain choice. The controller or scheduler decides what to show when, based on assumptions about what audience the channel will attract at a particular time in the face of competition from other alternatives. The television schedule provides temporal organisation, generally combining familiar fixed features while introducing some variety. It is this mix of predictability and surprise that provides pleasure and interest. Channels help us navigate through viewing options by providing familiar landmarks, brands, seasons and series, structuring the day and the week around certain fixed points.

Broadcasters spend millions on commissioning, acquiring, scheduling, promoting and presenting programmes. Television channels are constantly recommending new viewing options. What we watch is no accident. We tend to watch programmes because of the way they are scheduled and promoted. Our reasons for watching are often social, to enable us to participate in a shared experience and a collective conversation, even often from the relative isolation of our domestic environment.

It is evident that more channels imply more choice of what to watch, although we generally only have the same time available in which to watch them. Despite the expansion of television channels, the five main channels in the United Kingdom still account for 60% of viewing. We may each have our own favourite channels, but we will still generally pick programmes from a relatively limited range.

Digital video recorders might free us from the 'tyranny of the schedule' and allow us to view programmes at our convenience, but the choice is still limited by when they are transmitted. We still tend to watch them within a few days of transmission, generally before the next programme in the series. Otherwise they may go unwatched, as fresher alternatives are presented.

New services now allow us to catch up on programmes we may have missed within a certain window. This allows us to keep up with the relentless flow of programmes. The reality is that the vast majority of viewing is still defined with reference to the broadcast schedule because that establishes the social currency of our viewing and provides a general topic of conversation.

We seem to value the prospect of a vast range of choice, but we prefer to select from a limited number of options. We want to be able to participate in a collective experience but we also want to watch programming that seems personally relevant to us as individuals.

The challenge for an on-demand service is to provide a compelling selection in order to offer a viable alternative to the wide range of broadcast programming. The irony is that the more choices that are offered, the less appealing any particular title appears to be. So we still tend to turn to the flow of fresh programmes rather than the library or archive, irrespective of the range on offer.

The problem with making a catalogue of library programming available on demand is that if a title is there today, it will be most likely still be available tomorrow, so there is little incentive to choose it now. As a result, we may simply choose to avoid a difficult decision, postpone the choice and prefer programming from the broadcast schedule that may not be available tomorrow. Despite the apparent choice, on-demand viewing has therefore lagged a long way behind scheduled programming,

Jam today — Taste test

The problem of too much choice is described by Sheena Iyengar of Columbia Business School in a famous experiment conducted while researching a PhD at Stanford University.

The manager of a store in San Francisco agreed to conduct a tasting test. Two research assistants set up a table and encouraged customers to taste jams and marmalades. They excluded more popular options like strawberry or raspberry jam and orange marmalade and featured flavours like kiwi, peach and cherry. Sometimes they would offer a large assortment of 24 different types. At other times they would offer a smaller selection of six of the jams and three fruit marmalades.

They found that 60% of customers were drawn to the large assortment, but only 40% to the smaller selection. Each customer tasted two jams on average, regardless of the number available. They were given a coupon offering \$1 off any single jam. Customers faced with a choice of 24 products spent much longer choosing but only 3% proceeded to purchase. Of those that sampled the smaller selection, 30% went on to buy.

The conclusion was that while customers appreciated the range of choice, it did not help them make a selection. Rather than using samples to showcase variety, to promote sales the store should highlight a few options for a particular product or brand.

Programme discovery

The conventional electronic programme guide is only effective because the scheduled channels themselves select and organise programmes. So how can we discover new programmes in a world of almost unlimited options available on demand?

The two main approaches that are being adopted are Search and Recommendations.

Search

The rise of the internet, and Google in particular, has made search a normal part of most people's lives.

In the context of television, searching may allow us to find programmes of which we are already aware but cannot easily locate through normal navigation. This is generally a goal-driven activity aimed at a specific outcome. That works well if we know the title, or a keyword on which we can search. However, we may not know exactly what we are searching for. A good search system will provide relevant results even if we only provide a general search term. In order to do this it needs to respond not only to particular search terms, but to general concepts, as shown in Table 1, where many of the top search terms are not actually for television shows.

Historically, searching for programmes on television has been hampered by the limitations of user interfaces and remote controls. Search becomes easier with network-connected devices and more sophisticated user-input devices, from keyboards to touch screens, but it represents only one model of discovery. It is necessary, but not sufficient, for navigating a world of almost infinite choice.

Faced with apparent abundance, we do not typically search for entertainment, any more than we generally search for food.

Recommendations

The more general problem we face as television viewers is not necessarily finding a particular programme but deciding on what to watch. We want to be informed, educated and above all entertained.

In an ideal world, there would always be something to see that we want to watch, whether it is something we expect or something that surprises us. The challenge lies in discovering the unexpected.

1	lewis
2	britains got talent
3	midsomer murders
4	gossip girl
5	wormwood scrubs
6	lost
7	american idol
8	the prisoner
9	vampire diaries
10	midsomer
11	poiro
12	the bill
13	boxing
14	90210
15	waterloo road
16	drama
17	eastenders
18	football
19	glee
20	soap awards
21	coronation street
22	all at sea
23	f1
24	amir khan
25	doctor who
26	shameless
27	the vampire diaries
28	marple
29	dollhouse
30	whitechapel

Table 1 - Top UK Search Terms during May 2010, those marked in Orange are not actual TV shows

✿ Editorial recommendations

The most familiar form of discovery is by recommendation, either from an editor responsible for managing or marketing a service, or from an independent critic or commentator.

Such recommendations may have particular authority if they are from a brand or person whose values we tend to trust. The value of featured programme picks may diminish if we feel that they are more concerned with marketing than providing a genuine recommendation.

The problem with editorial recommendations is that they are generic, rather than personalised to us as an individual viewer, or our particular social group.

Recommending a programme to watch is notoriously difficult because it depends on so many factors, like mood. Even our partner or best friend may not always be able to suggest something suitable.

✿ Similar programmes

Another approach is to make a recommendation based on something we have already selected, automatically linking apparently similar items based on programme information or descriptive metadata.

- **Labels** play an important part in this, such as the programme title, description or synopsis, genre, classification or duration.
- **Content** is clearly significant, such as the names of participants, presenters or actors, or the location of the action.
- **Context** may also provide a key, such as the day of the week, time of day and channel on which the programme was transmitted, reflecting selections made by the scheduler and associations with the channel brand.

These elements may not all be equally relevant, so they may be assigned different weights or importance. The combination of these factors can be used to identify other apparently similar programmes.

There are nevertheless limitations with using this intrinsic information:

- **Ambiguity** – The programme title may be a clever pun that only indirectly reflects the subject matter.
- **Inadequacy** – The descriptive data may be incomplete, insufficient or possibly even inaccurate.
- **Irrelevance** – The occurrence of a common actor or location may be incidental rather than significant.

Titles and descriptions are often more concerned with marketing a programme rather than providing an abstract synopsis. The description may also be deliberately vague, to avoid revealing certain information or spoiling a storyline. There is the problem of genre, with formats or treatments that deliberately resist or subvert conventional

classifications. This introduces the further issue of subjectivity – not everyone will necessarily agree on the same description. Then there is the more general problem that a brief description cannot adequately express more subtle features that characterise one programme and make it either distinctive or similar to others.

Even if the description is unambiguous and accurate, a plausible recommendation based solely on the description may be otherwise inappropriate because of the viewing context. Inappropriate suggestions may be excused if the reason for the recommendation is evident, because they are apparently objective, but they demonstrate the limitations of the mechanism.

User activity

A powerful way of improving on the results of automatic recommendations is to combine programme information with observations of our personal viewing activity.

The assumption is that our previous viewing patterns can predict future viewing choices. This seems intuitive, since it takes into account previous choices that may reflect our personal habits, taste and preferences.

- **Passive** preferences may be inferred from previous selections, simply by watching a programme, bookmarking it, or series-linking future episodes for later recording. It might be reasonably assumed that having watched every episode of a series so far we are more likely to want to watch the next one.
- **Active** preferences may also be requested from the user, for instance by specifically rating a programme, or giving it a thumbs-up approval or thumbs-down disapproval. These assignments can provide feedback to promote or inhibit similar programmes in future recommendations.

We may have privacy concerns about passive tracking systems. Even if the data is not personally identifiable or shared, it can be disconcerting to us if it is used in this way, particularly without our express permission.

An obvious problem with active preferences is that the television is often a shared device, making it difficult to extract the preferences of an individual user, without asking them to log in or use a different remote control. It is however still possible to group certain preferences by time of viewing, or other characteristics, and multi-screen solutions where the viewers can refine their preferences on mobile or web-based devices provide an elegant solution to this problem.

The response of viewers to recommendations based on previous behaviour can vary according to culture and personality. Some people are delighted by apparently relevant recommendations and prepared to excuse less-appropriate suggestions. Some may find such recommendations rather intrusive and be highly critical if they appear inappropriate. Others may keep wondering why certain recommendations are made and want to tune them to make them more accurate.

The key is to ensure that the recommendations have the highest degree of relevance to the viewer.

Group behaviour

Recommendations may be further improved by taking into account the preferences of other people. This has the effect of combining the observed behaviour of a larger group and filtering out less-consistent actions.

In general, we are more similar in our behaviour to other people than we might wish to imagine. We may want to think that we are highly individual, but our habits and choices can be surprisingly statistically similar to others. So the choices of other people can on average provide a reasonable indicator of our own preferences.

- **Collaborative filtering** is an approach based on the assumption that those with shared similar behaviours in the past will share similar behaviours in the future.

Applications of this approach can take many forms. One of the best known is the model popularised by the online-retailer Amazon, which recommends items based on the statistical observation that people who selected x also selected y.

Such systems may have remarkable predictive power based on the aggregate behaviour of large groups of individuals. Many people find such recommendations useful and they often result in sales. Rather than personal recommendations, they are actually impersonal, since they appear to be objective, non-judgemental and therefore non-intrusive.

Social networks

Recommendations can also be tuned with reference to a particular social group. That might be geographically or demographically determined, or self-selected through association, such as members of a social network. The assumption here is that the choices we make about our associates reflect our own characteristics and preferences. They are more likely to be like us than other people in general.

- **Implicit** relationships may be inferred, simply through membership of a particular group of individuals or the connections between individuals in a wider group.
- **Explicit** recommendations may be stated by users choosing to rate or recommend a programme to others, either generally, within a social group, or to a particular individual. Such recommendations carry special status if they are from identified individuals.

By taking account of the shared experience of a wider social group, the relevance of recommendations can be considerably improved.

Enabling discovery on the TV

In the past, recommendation systems were largely limited by the constraints of the television network and the set-top box. The model of recommendation is changing as the television becomes a network-connected device or display and as media is increasingly viewed across different screens, such as computers and mobile phones. These can provide arguably superior interfaces for certain tasks, such as goal-oriented searching, or complex interactions.

Users are therefore more able and likely to exercise control over choice and personalise their viewing experience. By being connected to other devices and indirectly to other users, the power of recommendations increases significantly. Recommendations can be made more relevant by taking into account more factors and recognising not only the connections between programmes but also the social connections between individual viewers.

In a world where media may be viewed on various screens, across television, computer and mobile devices, it is important that relevant recommendations can be provided coherently across all these platforms to ensure a consistent user experience.

An ideal system will be able to support both search and discovery, blending editorial, contextual, behavioural and social recommendations to provide a personalised experience that reflects the way we want to watch television, not only as an individual but also as member of a wider social group.

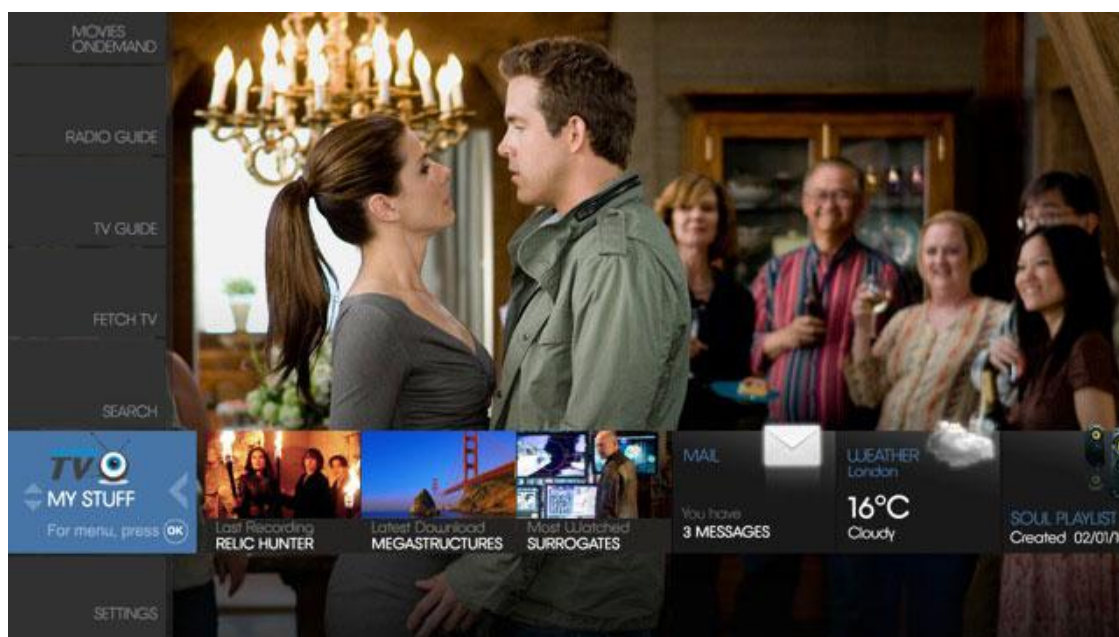


Figure 1 – an advanced Video On Demand user interface as deployed by the UK's Fetch TV

Benefits

The use of recommendations extends the guidance provided by the channel schedule to the domain of on-demand viewing. Recommendations can work across channels and on-demand libraries, providing a coherent user experience that serves the interests of the viewer. The benefit to the user is a more satisfying viewing experience that is more relevant to their particular tastes and moods.

The result for the service provider is increased user satisfaction, increased average revenue per user and greater loyalty to a product or service that can offer such features, reducing customer churn. Satisfied users are also more likely to recommend not only programmes, but services to their friends, becoming advocates – the most powerful and cost-effective form of brand marketing.

Wider viewing choices empower viewers but they can also be intimidating. Recommendations provide ways of guiding viewers through available choices. The best recommendations are based not just on the similarity of programmes but also take into account the similarity of certain groups of viewers and their individual preferences. New network-connected devices and displays allow forms of recommendation that reflect not only our own preferences, but those of our wider social circle.

Appropriate recommendations can respect the privacy of the individual and not be too insistent or persuasive. They should be:

- **Personalised** – tuned to the individual preferences of the viewer.
- **Relevant** – appropriate not only to the viewer but to the viewing context.
- **Consistent** – occasionally surprising without appearing arbitrary.

As in a good restaurant, a carefully selected menu should provide a balance of choices that does not overwhelm, and an attentive waiter should be respectful and courteous to the customer, but ready to make a good personal recommendation.

What to look for in a solution provider

There is a proliferation of companies offering search and recommendations services to the TV Industry at the moment. When looking for a platform it is important to consider the following:

🌀 How much experience do they have?

It takes about two to three years of real-world deployments for most suppliers to tune their recommendations engines to a stage where they can be reliably deployed anywhere. Make sure that you are not the first implementation of a new recommendations system unless you are sure it is much better than other ones.

🌀 How transparent is the recommendations algorithm to the user?

Users don't like it when technology does things that they don't understand and are particularly sensitive to automatic profiling and targeted advertising. Make sure that the user experience makes it clear why the shows are being recommended to the user at all times.

🌀 How easy is it for the viewer to start using the service?

The more barriers there are to start using the service, the fewer people will use it. Avoid services that require the users to answer questionnaires, however short, before they can get going.

🌀 How much overhead will there be in managing the service from your side?

Do you want a recommendations engine that requires a team of back-end staff to manage the service or one that runs automatically based on user activity and feedback? Make sure you are clear on the staffing implications of the product you choose.

🌀 What reporting is available?

You should expect reporting, if not real time then at least daily, showing the take-up of the recommendations, which are the shows that people are selecting the most and how this is driving take-up?

The TV Genius advantage

TV Genius is the premier provider of 3 screen TV discovery technology and the TV Genius Content Discovery Platform is used by millions of people across Europe to plan their TV viewing. Designed from the ground up as a platform to build TV guides, it has unprecedentedly rapid time to market and the flexibility to deploy and modify services as viewing habits change.

The GeniusRecommend product is available on the TV Genius Content Discovery Platform and has the following advantages:

- **Simple implementation** – a full recommendations service can be deployed with very low levels of systems integration, reducing the need for internal resources to support deployment and reducing time to market.
- **Fully managed service** – there is no overhead in updating the product as TV services evolve and a full 24x7 service-level agreement ensures any problems are resolved in as little as 15 minutes.
- **Extensive client base** – with a proven client base, TV Genius can be trusted to deliver. A sample of clients includes AOL, Arena, Bauer, BSkyB, BZ Berlin, Daily Mail, Freeview, IPC Magazines and ITV.
- **Low cost of ownership** – with little systems-integration cost and a fully managed service, the cost of deployment is much less than comparable solutions that require extensive customisation and management.
- **Shared data set** – with a large number of customers across Europe, TV Genius has built a Relevance Map based on a wide range of existing usage patterns that provide a high-quality service without a long period for training the system.

To learn more about how you could implement TV recommendations, please email sales@tvgenius.net

