

SwarmTv Web-interface XML generator.

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To make the SwarmTv system more user-friendly one could consider that it should be accessible via the internet. Most home systems (be it a computer or Embedded device like a PVR) are behind a firewall. Since most firewall implementations block all incoming communications, you are not able to access a device that's behind the firewall without setting up port-forwarding. Port-forwarding can be considered a complex task for the non-computer savvy so this should be avoided. The best way to prevent port-forwarding is to initiate the connection from the inside out. This means the system will have to make a connection to a server on the internet to make communication possible.

Now we would like to introduce the Web-interface XML generator. The Web based XML generator will make it possible for the end-user to make and manage their own subscriptions to Virtual Channels (VC) on a server on the internet. They should be able to search the available Virtual Channels by just typing the associated keywords of the channel. The results will be listed on the following web-page and can be selected to be included into the users own Virtual Channel List (VCL). This list will be available for the systems behind the firewall by connecting to the Web server that has the Virtual Channel List on record. This can be the Web-interface XML generator server, the index server or a third party server that is connected to the overall distribution system. Most likely the VCL will be protected by a authentication scheme like a user:password combination or another more advanced authentication system. The VCL will be stored in an XML formatted file so it can be easily implemented in various systems.

So in short an example of user interaction is given:

The following requirements are thought to be true:

The SwarmTv system is connected to the internet and correctly configured to be able to download the VCL from the server.

The End-user has already made an account with the server to create/edit/delete Virtual Channels from the VCL.

The End-User "John" is at a friends house and during a conversation the friend suggests that John should watch the new Sci-Fi TV-Series "Outer-Space Blue", the new space police tv-show. John thinks sure why not give it a try; maybe I'll like the series. John takes his Internet enabled phone/PDA and connects to the home page of the server that contains John's VCL. He enters his username and password and is presented with his current subscription list. Almost 30 TV-series are listed in his subscription list. John enters the keywords " Space Blue" into the search field and the server displays the hits on "Space Blue" in a new list. Among the list there is "Outer-Space Blue" with the Virtual Channel description "Action packed Sci-Fi police investigation series, rated 4.0 out of 5.0 by the users". John selects the "Outer-Space Blue" series from the list and subscribes to the series. The SwarmTv system at home will retrieve the XML list every half hour and notices the change in the subscriptions. It will proceed and download the available episodes to the SwarmTv system. So when John returns home later that evening the episodes will be waiting on the SwarmTv system to be viewed by John.