MediaAuth, addressing Media Authentication for the broadcasters

Personalised services for broadcasting

In these days, many broadcasters have started to offer personalised service or social media platform like services to their audience in particular with hybrid broadcast/broadband services. This generally means that people from the audience have to create an account on the broadcaster website where their personal settings and preferences are stored. This new way of doing is a little revolution in the usually anonymous broadcast world and it has many legal and technical implications like what can be stored about the audience ? How can it be used ? What can be shared with partners ? Where are the data stored ? For how long ? Etc… In this article, we will leave the legal implications and focus on the technical aspects.

Current situation

The first problem that arise in a broadcast context is that the audience is zapping between channels from different broadcasters and so in theory one would have to create an account on each broadcaster website. This can quickly become a cumbersome operation for the users as they would need to manage different logins and repeat the same operation for each personal device. One quick answer is to rely on authentication offered by popular social media platform such as Facebook or Twitter what some broadasters are already doing. However, this force the audience to register on these platforms and it is hard to integrate these platforms in a standard as they are proprietary. There's also an uncertainty on their conditions for offering such a service in the future. At the moment no simple solution exist. There's a need for a distributed mechanism where the audience could authenticate once and on which broadcasters could rely to store user personal data.

Hybrid Radio case

One of the interesting feature of hybrid radio is for the listener to have the ability to tag interesting audio elements for later consultation, more information or to continue listening. People want Radio to be simple and so it is important that such a feature is transparent across devices and channels from different broadcaster.

From this objective, EBU Technical Labs has started to work on a showcase for IBC 2012 with expert students, continuing on what has been specified by RadioTAG group from RadioDNS.

Quickly, the idea has come up to build a system similar to OpenID, a decentralized authentication system used by Yahoo, Google for example where user can authenticate once on any of these providers to access services on the others. OAuth2.0 distributed authorization protocol as currently standardised by IETF, has been used as a basis. Details (beyond the scope of this article) can be found in the reference document on ebulabs.org but the different elements as illustrated are

- The Service Providers (broadcasters) who offer the media services and store the actual data from user on their specific channels.
- The Authentication Provider that hold the credentials from the users and is responsible for identifying and authenticating users. This can be for example be receiver manufacturer portal or can also be the broadcaster.
- A directory, that responsible for the authorization of Authentication Providers and Service Providers. It stores also which AP is authoritative for a given user.
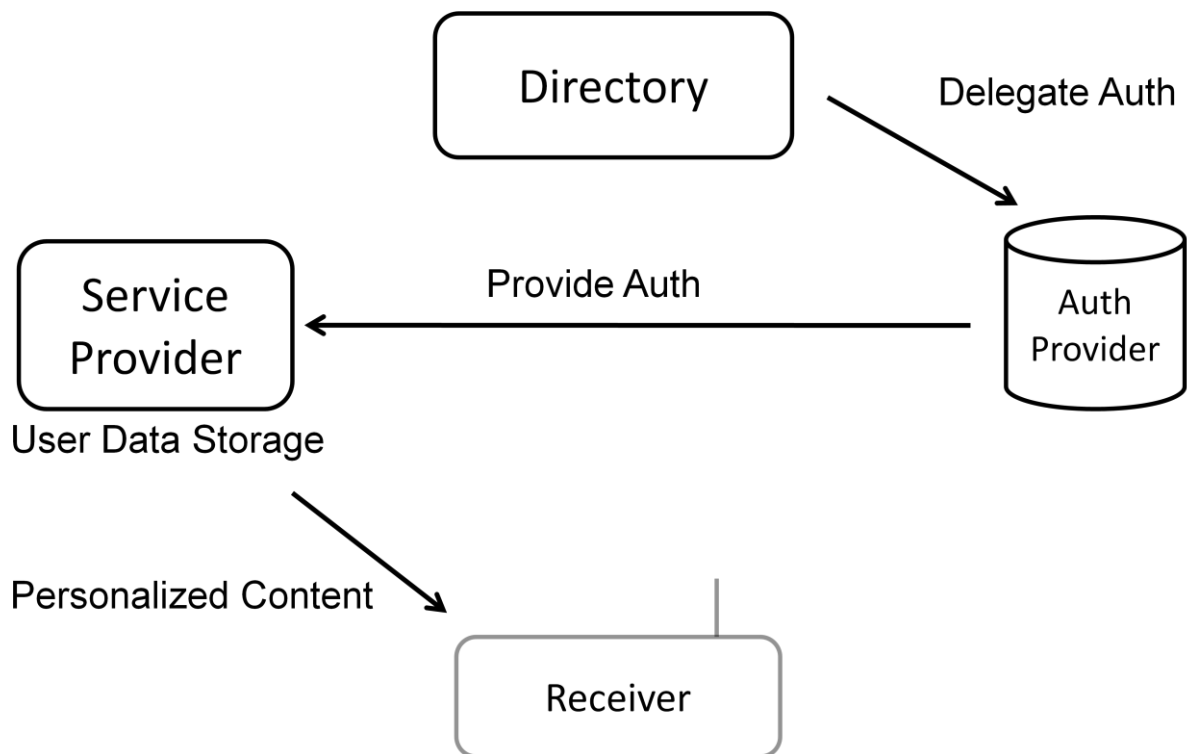
To make it short and simple, in such an infrastructure, users login once using their email and providing a single password. Based on the email, the directory will divert the service provider to the right authentication platform to authorize store or retrieve data for this user. This mechanism offers easy and seamless cross-platform and cross-channel personalization while avoiding to centralisation of user credentials and data.

Conclusion

The proposal is not limited to radio and can be applied to any media service. However, if it would be widely deployed, it would pose political questions, for example regarding the role of the directory. The directory could be avoided but then this would make the user experience more complicated. There are clear tradeoffs between simplified user experience and centralisation of the infrastructure.

In conclusion, we hope that this proof of concept will help to start to address the problem of media authentication for personalised media services in the future as no standardised solution exist nowadays for broadcasters and devices.

Details of the system can be found on: http://www.ebulabs.org/wp/?page_id=492