Thriving as Web Platform Enabler – Beyond 'Dumb Pipes'

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The advent of the mobile internet has been a great success, but it also appears to have opened Pandora's box. The problem is that the surge in data consumed by users is not compensated for by an adequate growth in revenue. This is mostly due to the fact that in order to promote the mobile internet CSPs have introduced flat rates. The tension is even greater because the real beneficiaries are over-the-top players like Google, whilst CSPs seem to have been cast the role of 'dumb pipe' providers. As a result, CSPs are seeking a way out, in order to be able to fill the gap between increasing costs and flat revenues. As a remedy, a concept has emerged that exposes service delivery platforms to third parties, including the

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community of developers, has emerged. The concept is closely related to the idea of operator application stores.

Critics of this approach argue that telco operators lack the competences to provide a platform for developers, and that the API provided is too limited to be attractive to developers. Moreover, the problem is that the only platform which really holds any significance for developers is the Web itself.

End-users inherit CSPs' problems

From an end-user perspective we might say that problems encountered by CSPs are exactly that: their problems. However, this belief is slightly naive as it is

always the customers who finally pay the costs. When looking more closely at the surge of data consumed by end-users, it turns out that the majority of data is consumed by relatively small user groups. These groups are either peer-to-peer application riders, YouTube addicts or alike. What does this mean for the average user who probably only needs email access or basic web browsing services when he/she is on the go? Well, it is likely that they will pay extra to cover the costs generated by high data usage profile users. 'Paying' can mean literally both covering the costs and the receiving of a poor quality of service (QoS). We will most likely pay money. This is due to the fact that flat rates are calculated according to the rule of average, which means that the majority of users pay more, so high data usage users can pay less. Suffering from a poor QoS is even more evident, as inevitably, when accessing the internet, each of us has recognized that the real bandwidth is far smaller than advertised by the CSPs.

Selling more than just 'dumb pipes'

The solution, which is expected to solve both CSP and end-user problems, is shifting the role of telco operators. Instead of selling Mbps, operators will be able to sell service and application enablement. This means that application connectivity with the

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appropriate QoS is tuned to a service. From the end-user perspective it is the services and application, with embedded connectivity, which are purchased. Embedded should mean that connectivity costs are included in the price for the service/application. For the end-user it enables maintaining unconstrained access to their most favored applications/services without the need to count minutes or kilobytes. For CSPs it enables receiving compensation for network costs according to the application/services network usage profiles. An example service package can be an email and basic web browsing package or access to social tools, for example, unlimited use of Facebook or alike. An example from the opposite end of the spectrum could be a peer-to-peer applications package. The idea is designed to enable end-users to decide for themselves what it is they want to use, as we all have different needs and thus a different perception of what the Web is.

CSP as a Web Enabler

The question, which may arise, is how to implement the idea without granting telecommunication operators too much power. If the only way to use applications and services was via an operator's application store, it would probably mean that operators would have a monopoly -acting out the role of gate keepers. Being a true enabler must mean that third parties have a choice as to whether they want to leverage an operator's application store or whether they prefer to use alternatives. In the case of the latter, the operators should only provide a network enablement, or more precisely, the discussed network QoS required by a third party service or application. This is expected to enable different business models as some developers may chose revenue sharing, leveraging operators application stores with a built-in charging and billing functionality, while the others may chose to pay purely for network QoS enablement. The role of CSPs service platform is depicted in "Fig. 1"
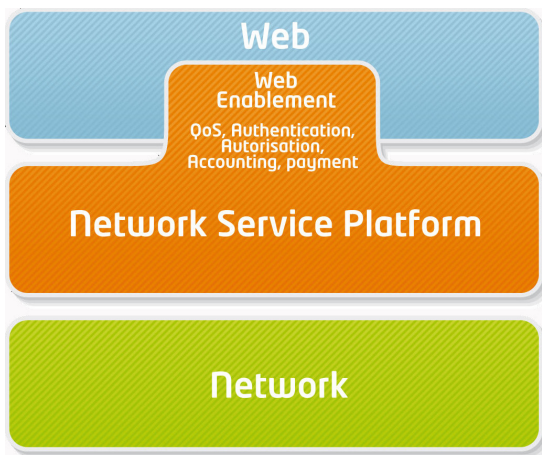

Fig. 1 Web Enablement platform

Selling User Experience– business models

Retailing QoS by operators will require the technical capabilities of traffic shaping and policy enforcement, which may be challenging. The envisioned practical approach is that when an end-user acquires a 'basic browsing' package and all online applications, which

confine to the assumed 'basic' QoS, the providers of these applications will not require additional enablement. However, if the application is data intensive, for example video streaming, in order to guarantee appropriate user experience, the third party application will need the appropriate network QoS enablement. This, in fact, means that CSPs provide something more than a technical oriented network QoS, instead enabling good user experience. Depending on the business model, the costs of the enablement can be covered either by the price of the application paid by the end-user, or in the case of Ad supported usage of the application, the owner of the application will cover the costs. In addition, an end-user can purchase the 'video streaming' package to cover the costs of the required enablement.

In conclusion, the overarching idea is that each party is paid according to the added value it brings to the ecosystem. At the same time, end-users should have a choice regarding what they pay and what experience they receive in return.

CSPs vs. the Over-the-top players

The idea presented above - of CSPs playing the role of a web enabler - is attractive as it allows both competition and cooperation with the over-the-top players while in each case gaining a profit. Competing means that CSPs endeavor to create their own developer community. Cooperation on the other hand is treating the over-the-top players much the same as developers, which means that they are treated as application providers. But in this scenario over-the-top players are likely to have direct access to customers which distinguished them from just individual developers. As CSPs are to sell User Experience enablement rather than just being 'dumb pipes', it should allow them to have a fare share of revenue generated by the customers of over-the-top players. This is because the proposed mechanism would allow CSPs to be compensated according to the added value they bring to the end-user applications. For example, in case of an end-user application, whose value is based mainly on network ability to carry the content with appropriate QoS, the CSPs

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should get a relatively high revenue share. Video streaming applications are an example of this. On the contrary, in case of an end-user application, whose main value is not based on connectivity but on some other business logic (where connectivity is not intensively used), the CSPs' share should be relativity lower. In either case CSPs may receive adequate compensation for network related costs. For us - as end-users - it seems to be a perfect solution as everybody receives a fare share according to the value they bring.

Conclusion

Over-the-top players and CSPs don't have to be bitter enemies. They can cooperate or at least compete on fair terms where each party is compensated for the costs it endures and receives revenue share according to the value it brings. This is also good news for end-users who, after all, always pay the final bill. If the role of web enabler was to be taken over by CSPs, and connectivity costs covered by applications, this would allow end-users to retain the freedom which flat rates provide. Freedom means the ability to enjoy applications without counting consumed kilobytes. At the same time heavy usage users don't have to add to the bills being paid by modest users or broaden the CSP revenue-costs gap. It also dispels the CSPs' frustration caused by thriving over-the-top players being the only winners, while CSPs suffer the costs.