INSIGHT

Operators need to engage with WebRTC and the opportunities it presents

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Stephen Sale and Tom Rebbeck

The emergence of app-based services like Skype and WhatsApp in recent years has dramatically changed the way communications services are produced, consumed and monetised. Web Real Time Communications (WebRTC) looks set to represent the next stage of transformation, because it embeds real-time communications capabilities into the web browser, making it dramatically easier to offer and consume communications from any web page. Having largely missed out on opportunities in the emergence of app-based communications services, operators need to proactively engage with the possibilities of WebRTC and incorporate it into their next-generation communication strategies.

The number of WebRTC-enabled endpoints will be almost 7 billion by 2020

WebRTC is already a major focus for innovation, despite the technology's relatively immature ecosystem. The best known example of a WebRTC service is probably Amazon's Mayday customer care service for the Kindle Fire HDX. Much of the current development effort in WebRTC is based on video-enabling various applications (from mobile health to online education, from adult entertainment to remote diagnostics); enterprise collaboration, contact centres and sales enablement are also garnering attention. More use cases will emerge. A major strength of WebRTC is that it uses HTML5 and JavaScript APIs to open up real-time voice, video and data capabilities to the large community of web developers. There are several million JavaScript developers, compared with only a few thousand traditional telecoms developers.

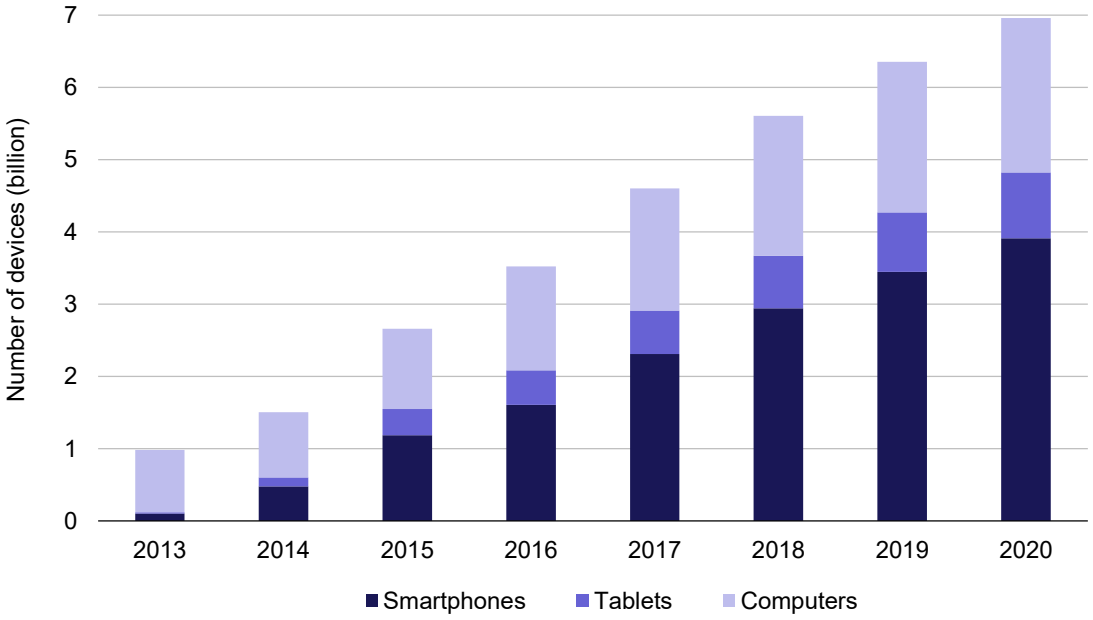
We estimate that there are currently more than 1 billion WebRTC-enabled endpoints, with Chrome and Firefox browsers accounting for the majority. We expect Apple and/or Microsoft to incorporate WebRTC into their browsers as the ecosystem matures and WebRTC 2.0 is standardised. We forecast that the number of WebRTC-enabled endpoints will approach 7 billion by 2020 (see Figure 1). The number of enabled smartphones will overtake PCs in 2015, and tablets are also a growing category. One major growth driver is Google's push to add WebRTC to Android WebView, thereby embedding the capability in the world's most popular smartphone OS.

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Figure 1: WebRTC-enabled endpoints by device type, worldwide, 2013–2020 [Source: Analysys Mason, 2014]



Operators can use WebRTC to extend their services to other devices and new verticals

The web community is currently the main driver of WebRTC initiatives, but telecoms operators can also play a number of roles in the WebRTC ecosystem.

- **Telecoms service extension:** Operators can use WebRTC to extend their own communications services – voice, video and messaging – across devices, such as tablets and PCs.
- **Telecoms elements for vertical services:** Operators can provide communications services to be incorporated with other services and tailored to the needs of specific verticals, such as health, manufacturing or education.
- **Infrastructure provision:** Operators could provide WebRTC infrastructure as a service in the form of signalling, gateways, quality of service (QoS), STUN/TURN hosting for NAT traversal, and multipoint bridging.
- **Exposure of service capability:** WebRTC offers a means to open up operators' service capabilities to third-party developers via APIs.

Of the various roles that operators can play, most of the current activity in the market is focused on service extension. Many operators are already seeking to extend their presence beyond the handset, particularly onto tablets and PCs. However, many of the most-interesting revenue-generating opportunities lie in vertical applications where operators can make use of their strengths in the value chain, potentially in partnership with vertical-specific players.

The other two roles present more of a challenge. Operators are already at risk of missing out on opportunities in infrastructure provision (with the notable exception of Telefónica following its acquisition of TokBox) despite

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possessing the means to differentiate. Courting developers directly with the exposure of service capability is a promising area but one that the industry has yet to fully digest. Radical wholesale business models are now technically viable but present their own organisational challenges.

Whichever approach operators decide to pursue, WebRTC provides a chance for them to participate in the development of new services. Failing to act leaves the door open for yet another set of nimble competitors that will make further inroads into operators' customer bases.

Analysys Mason published the first major analyst house report on WebRTC in March 2013 (*WebRTC: an opportunity for operators to drive future VoIP services*) and has engaged with a number of clients on the topic. We also recently published a white paper on WebRTC.

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