

Will The Internet Replace Your Phone Number?



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Your smartphone and desk phone will remain (for now at least), but your phone number might be about to disappear — here's why. Free image: Wikimedia Commons.

As the power of the Internet gets ever stronger, we will increasingly turn to the web as our primary communications channel. For many people, Skype is already their go-to preferred means of communication — although other video 'hangout'-type applications are also available.

The question we now face is: will the software application developer community harness new and emerging technologies in this space to make our landline and smartphones completely redundant? SPOILER ALERT: The answer is no, your smartphone and desk phone will remain (for now at least), but your phone number might be about to disappear — here's why.

Real-Time Communications (RTC)

The acronym you need to know is (RTC) for Real-Time Communications. The technology you need to know about is

WebRTC, a free and open source project designed to provide browsers and mobile applications with real-time communications (RTC) capabilities. The connection point to WebRTC is through simple APIs, or Application Programming Interfaces.

The project's self stated goal is as follows, "Our mission is to enable rich, high quality, RTC applications to be developed for the browser, mobile platforms and IoT devices and allow them all to communicate via a common set of protocols. The WebRTC initiative is a project supported by [Google](#) GOOGL +0.92%, Mozilla and Opera, amongst others." The WebRTC home page is maintained by the Google Chrome team.

"WebRTC is finally finding adoption with almost all major browsers either fully implemented or planning to implement the technology," said Brad Bush, chief operating officer of [Dialexa](#), a Dallas-based technology innovation firm. Dialexa, designs and engineers technology products across mobile, web, IoT and embedded device platforms. "This technology is already used in many applications in the enterprise, from web-enabled customer service agents to free conferencing services. A main advantage is that the contextual data around the call is readily apparent and can ride along with the call. Companies can now combine context and communications in innovative new applications."

How to make a WebRTC call

- All a caller needs to do is access an Internet URL that represents a calling point to initiate a connection; a simple application could be a website's click to call button, but the address could be accessed by any technology or application.
- All the recipient needs to do is be able to access an Internet URL that represents a user end-point where a recipient can accept a call; this could be another browser, or equally it could still be a

Session Initiation Protocol (SIP) enabled desk phone or smartphone.

Click to call functionality has been around for a while, but WebRTC now enables this kind of option to happen without additional browser extensions and plug-ins while at the same time creating a standard methodology for connections. In other words, the enabling factors to allow these kinds of calls to proliferate are aligning positively.

We might reasonably suggest from here that software application developers will start to incorporate call from webpage options far more abundantly. But it won't just be webpages; it will be applications on your tablet browser that allow you to call, it will be web social services such as [LinkedIn](#) LNKD -0.87%, it will be web applications such as [SAP](#) and Workable, and soon within Internet of Things devices (such as cars or airport kiosks perhaps) and beyond. Paul Pluschkell is Genband's EVP of strategy and cloud services and founder of Communications Platform-as-a-Service (CPaaS) company Kandy. Pluschkell says that, "WebRTC helps to democratize communication and makes embedding voice or video calls from any application, device or browser simple and secure. We at Kandy take this a few steps forward and see this space as Communication Platform-as-a-Service, helping anyone to embed contextual communication with built-in security for a successful outcome, without any limitations based on whether the user is coming from WebRTC, [SMS](#), mobile or PSTN endpoint."

The Kandy platform includes the latest encryption technology such as SSL, HTTP and Secure Real-Time Protocol (SRTP) to ensure data privacy and end-to-end security. Advanced authentication mechanisms such as SMS and IVR-based two-factor authentication through simple and flexible APIs and SDKs deliver additional security options.

"WebRTC provides a cheap alternative to complex telephony solutions. As an added plus, you can make it compatible with existing VoIP systems using WebRTC gateways. But keep in mind that if you're setting up a big conference call, you will need another application to

manage signalling between all the participants. A significant issue is that, despite WebRTC being supported by some major browsers, it's not yet an industry standard – in other words, you still need a third party app for your smartphone. So far WebRTC has been a great choice for those who need to provide their customers with video or audio chatting directly from browsers, but several years down the road we could have a standard for online conferencing technology which will not require any third party plug-ins, it will just work as is,” said Anton Garkusha, VP of telecom solutions at global technology consulting firm DataArt.

Brighter communications future?

The click to call from anywhere future sounds good, but there will be security concerns. In fact... make that security, identity and privacy issues. If we are changing the way we communicate to a so-called ‘paradigm shift’ degree, then the whole question of communications encryption is thrown up from base zero. Signs point to positive progression here though and scrutiny has been addressed a lot over the last couple of years. Some argue that being in the browser for communications actually increases the security, so keep dialling.

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