



# WebRTC Redefines Value Added Services

## Introduction

Using WebRTC can transform a traditional Web page in to a multimedia service that embraces a “Click to Call” culture or when incorporated into the Convergys Multimedia Services Platform (C-MEX) can stimulate higher call completion rates.

## Why WebRTC?

WebRTC is an exciting new technology that brings real-time communications in the form of voice and video to standard Web browsers, adding a new dimension on how a Web page can interact with the viewer.

## What is WebRTC?

WebRTC is a technology that enables a standard Web browser to make multimedia (voice and video) calls direct to other browsers or to other communication systems, such as a conference server. It provides a means for a Web site (after the user grants appropriate permission) to integrate multimedia calls as easily as including forms or other media content onto a page.

With this type of integration Web pages can readily include conversational interaction between parties within the context of a Web session.

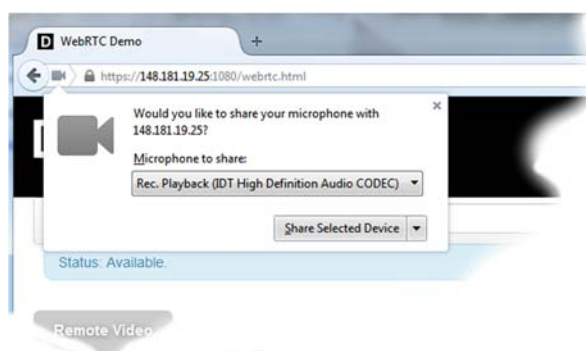


Figure 1 - Dialogue requesting access to media resources

The easiest use case to visualise is a “click to call” button to talk to a customer service representative while navigating a company’s Web site.

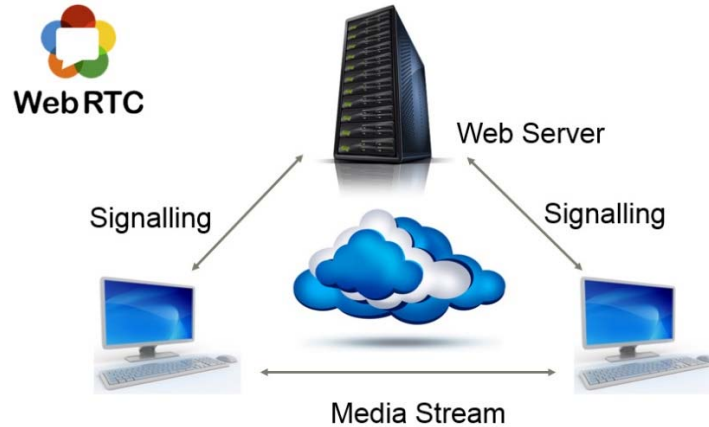


Figure 2 - WebRTC Overview

WebRTC differs from Voice over IP (VoIP) clients that can be installed on PCs because the “signalling” between the Web page and the server is totally up to the Web page programmer. This WebRTC model means the user experience of a media session can be seamlessly blended into the function of a Web site.

## Importance of WebRTC

Voice and video calling has previously been the preserve of telecommunications service providers, such as, Telefonica, Vodafone and more recently Over-The-Top (OTT) providers like Skype and Viber. The ease of use of including real-time communications into any Web site moves voice and video calling from being a service in its own right to being a channel in a rich multimedia experience orchestrated by a Web site. Readily available on billions of devices, WebRTC further challenges the established service providers’ business model.

## What is WebRTC being used for?

Many use cases are already successfully commercially deployed:

- Access to call centres via “click to call” buttons on Web sites
- Multichannel chat and conferencing
- 1-to-1 training, for example, personal fitness trainer supervising a workout
- Healthcare, access to a medical practitioner from your own home
- Robotics
- Entertainment
- Security and child supervision.

How service providers embrace WebRTC?

Service providers still possess a significant relationship with their customers and can enhance service access using WebRTC as a channel for their customers to use. Premium content could be accessed and paid for using the billing relationship that a service provider has with a customer.

A service provider can also provide a gateway service to allow a customer to make WebRTC calls to other networks, but still using their service provider account and identity. This model will be particularly attractive if a user only has WIFI access, or wishes to eliminate roaming charges whilst abroad.

Making it work

WebRTC is a technology which consists of an API definition that defines a mechanism for scripts embedded in Web pages to connect media streams to the media resources, such as a camera, speakers and/or a microphone of the device that is viewing a page.

An important aspect of the WebRTC standard is that it does not attempt to cover the signalling requirements between Web browsers or any intermediary servers to establish the connections. This is left to the application domain. So where any particular WebRTC session is directed is up to the Web page to coordinate, as illustrated below.

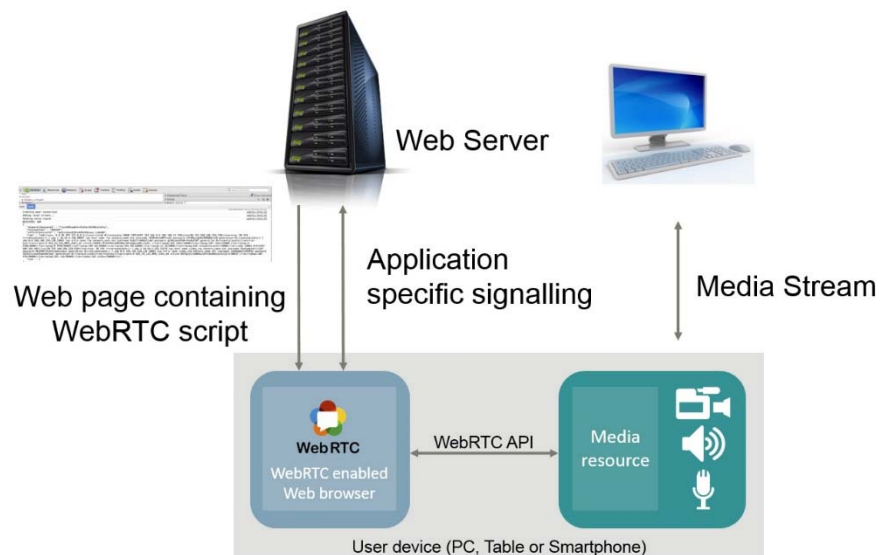


Figure 3 - WebRTC details

It could be that a “click to call” button establishes a session with a customer service representative or a button on a Web page connects a user to an ad-hoc chat room. WebRTC does not cover identity or presence, this has to be built into the application, which means a user cannot receive unsolicited calls.

## Convergys C-MEX support of WebRTC

Convergys believes that WebRTC is a game changer in the world of digital customer engagement and has incorporated this technology into its Multimedia Services Platform, C-MEX.

Available as a generic voice and video channel to access services on C-MEX, WebRTC has also been incorporated into specific applications to provide exciting new use cases. An example of this is the “*call return*” feature of a voicemail Web user interface.

The voicemail Web user interface provides a “*webmail*” like interface to allow users access to their voicemails through a standard Web browser. Previously this interface provided a means for users to see a list of their voicemails and to listen to them using the media resources of the device being used to view the Web page.

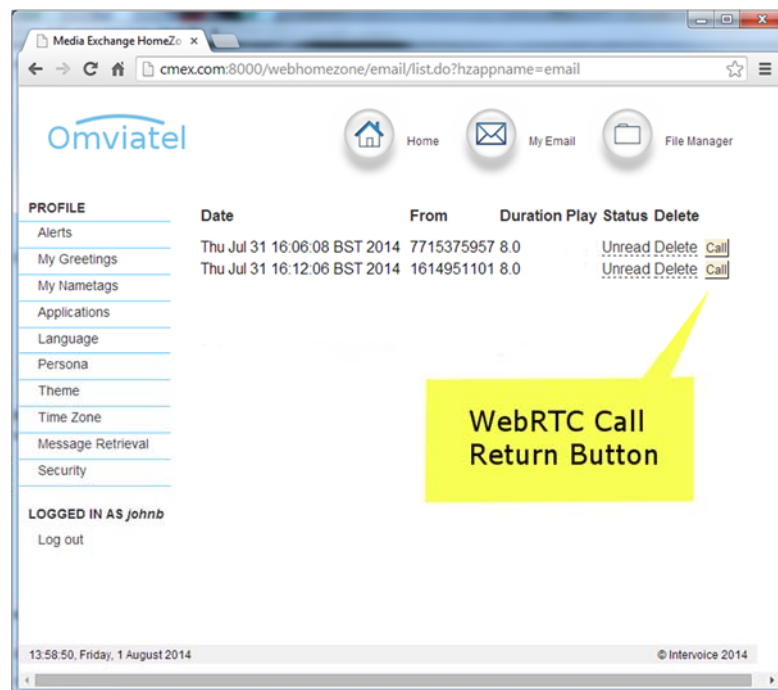


Figure 4 - Webmail call return example

This user interface is now extended to include a “*call return*” button for each of the messages to use WebRTC to establish a return call to the person that left the message. In this scenario, C-MEX acts as a gateway to connect the WebRTC call into traditional voice networks and by doing so, gives the operator the opportunity to use C-MEX’s extensive billing capabilities through an on-line/offline *Diameter Interface* and maintains contact with a voicemail user.

This feature is particularly advantageous to roamed users who can retrieve their voicemails and return calls using the internet rather than incurring potentially expensive roamed calling charges.

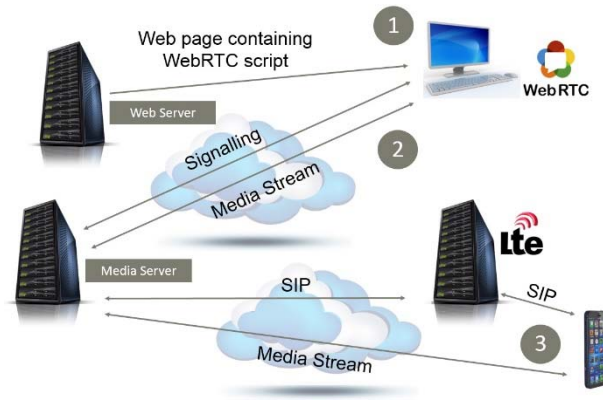


Figure 5 - Webmail call return scenario

1. Mailbox user opens up voicemail web page.
2. User clicks on the "call return" button and the browser establishes a WebRTC call with the C-MEX media server.
3. The C-MEX media server bridges the call into the mobile network.

The "call return" scenario is just one example of the type of services that can be offered using WebRTC on C-MEX; either as an access method, or by providing a gateway through to public or private telephony networks.

WebRTC can be used for traditional IVR services, videos or C-MEX's multimedia conferencing facilities to create online meeting places for users from both a conventional voice channel and WebRTC in the same conference.

When C-MEX is combined with the Convergys API Connect application, WebRTC can be incorporated into social media applications, as illustrated in the following Facebook "webmail" application.

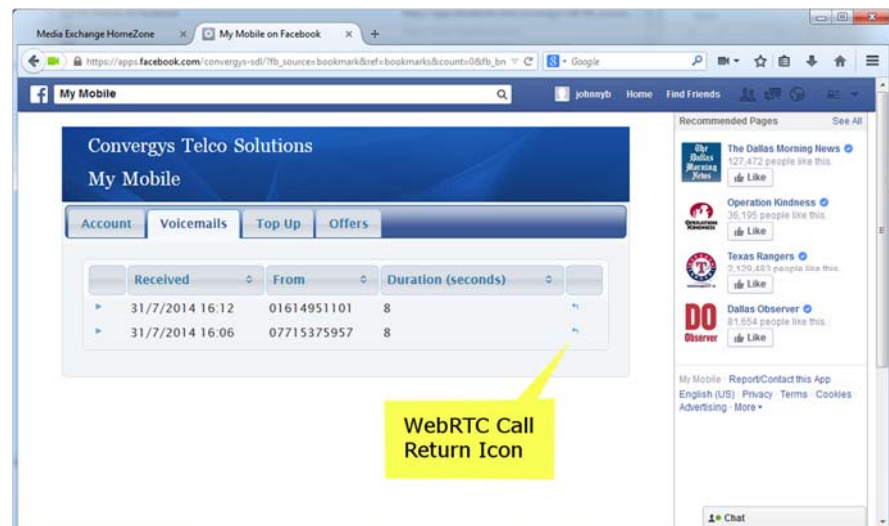


Figure 6 - WebRTC Call Return button in Facebook app

The flexibility of Convergys products gives endless service innovation possibilities.

## Conclusion

WebRTC is an exciting technology that will dramatically enhance your digital customer engagements and challenge the established model for voice and video-based services.

Traditional VAS platforms have relied on subscribers retrieving voice or video calls from their handsets. Incorporating WebRTC as a new dimension, your VAS platform embraces OTT technology and competes with other vendors by providing choice to your subscribers, as to when and how they wish to retrieve their voicemail.

With over 30 years' experience deploying VAS solutions around the world, our Multimedia Service Platforms handle millions of subscriber interactions a day, as well being able to provide many different call completion solutions that can meet the needs of a changing market.

All of our VAS solutions can be integrated with WebRTC, therefore, providing a complete call completion experience to your subscriber-base through a multichannel environment that can be accessed from countless devices.

For more information on how WebRTC can be used with the Convergys Multimedia Services Platform, contact [technologies@convergys.com](mailto:technologies@convergys.com)

## Portfolio

**Campaign Management Solution:**

Real-time Campaign Management.

**Value Added Services:**

Call Completion

Messaging

Multimedia Services Platform.

**Online Charging Solution:**

Online Charging.

## About Convergys

Convergys delivers consistent, quality customer experiences in 47 languages and from more than 150 locations around the globe.

Convergys have the breadth and diversity to provide solutions for all tiers of operator which span the whole customer lifecycle, from real-time campaign management to online charging to call completion and messaging solutions, all leading to an increase in revenue and loyalty in saturated market circumstances.

Convergys offers the expertise, technology, and experience that ensure you're successful from the start with our Convergys real-time Campaign Management Solutions. Our Convergys Analytics and Managed Operations Services provide experienced consultants who can assist you in planning, executing and optimizing your campaigns.

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