2015 WebRTC State-of-The-Market Report

July 2015

Sponsored by: Sonus Networks, Inc.

Introduction and Key Findings

This State-of-the-Market Report provides quantitative insights and qualitative analysis on how IT professionals are using WebRTC today and how they plan to use WebRTC in the coming year. One year after our first report on WebRTC, the 2015 results show that awareness of WebRTC has grown.

WebRTC is a platform that provides web application developers the ability to write real-time multimedia applications (such as voice calls and video chat), without requiring software plug-ins, downloads or installs. It enables real time applications that are developed in the browser using JavaScript Application Programming Interfaces (APIs) and HTML5. Currently browsers like Google Chrome, Mozilla Firefox, and Opera Web Browser support WebRTC; however, Microsoft Internet Explorer and Apple Safari do not offer native support for WebRTC. The World Wide Web Consortium (W3C) is developing the WebRTC Application APIs, while Internet Engineering Task Force (IETF) is working on associated protocols.

The most recent survey showed very few key differences between 2014 and 2015 responses to repeat questions. As indicated below, the only significant difference was a decrease in the number of respondents who had heard of WebRTC but still had no plans to use it. Unlike 2014 when near-term support for WebRTC remained the greatest among small businesses and larger enterprise, support for WebRTC in 2015 is more evenly spread based on business size, with an uptick in support among mid-sized organizations.

In 2014	In 2015	Respondents:
43%	47%	had used WebRTC or planned to use it within the 12 months
43%	31%	had heard of WebRTC, with no plans to use it
90%	90%	believed WebRTC has the potential to improve contact center services
67%	67%	viewed WebRTC as a potential solution for external video communications
85%	85%	considered WebRTC and SIP solutions as complementary

The 2015 survey asked some additional questions beyond the 2014 sample, with a focus on collaboration and organizational requirements for contact centers and educational support. Fifty-five percent of organizations responding find it critical or important to collaborate with external

partners.   Nearly half of respondents also identified support for contact centers and internal education as either critical or important.

The survey, conducted in March 2015, asked 191 IT professionals about WebRTC plans and perceived trends. Data was collected to highlight the perceived benefits and barriers to introducing WebRTC, as well as to show who IT managers will seek out for WebRTC support and services.

Respondents were well balanced by company size: about 26% answered for small business, while another 23% came from organizations with 1,000 to 1,999 employees. About 16% of responses represented organizations with 100 to 999 employees; 16% from organizations with 10,000 to 49,999; and 18% came from organizations with 50,000 or more employees. Geographically, 61% of the survey sample came from the U.S., 20% came from Europe, and 8% from Asia, with the balance coming from other regions.

WebRTC Deployment Plans: Yes and No
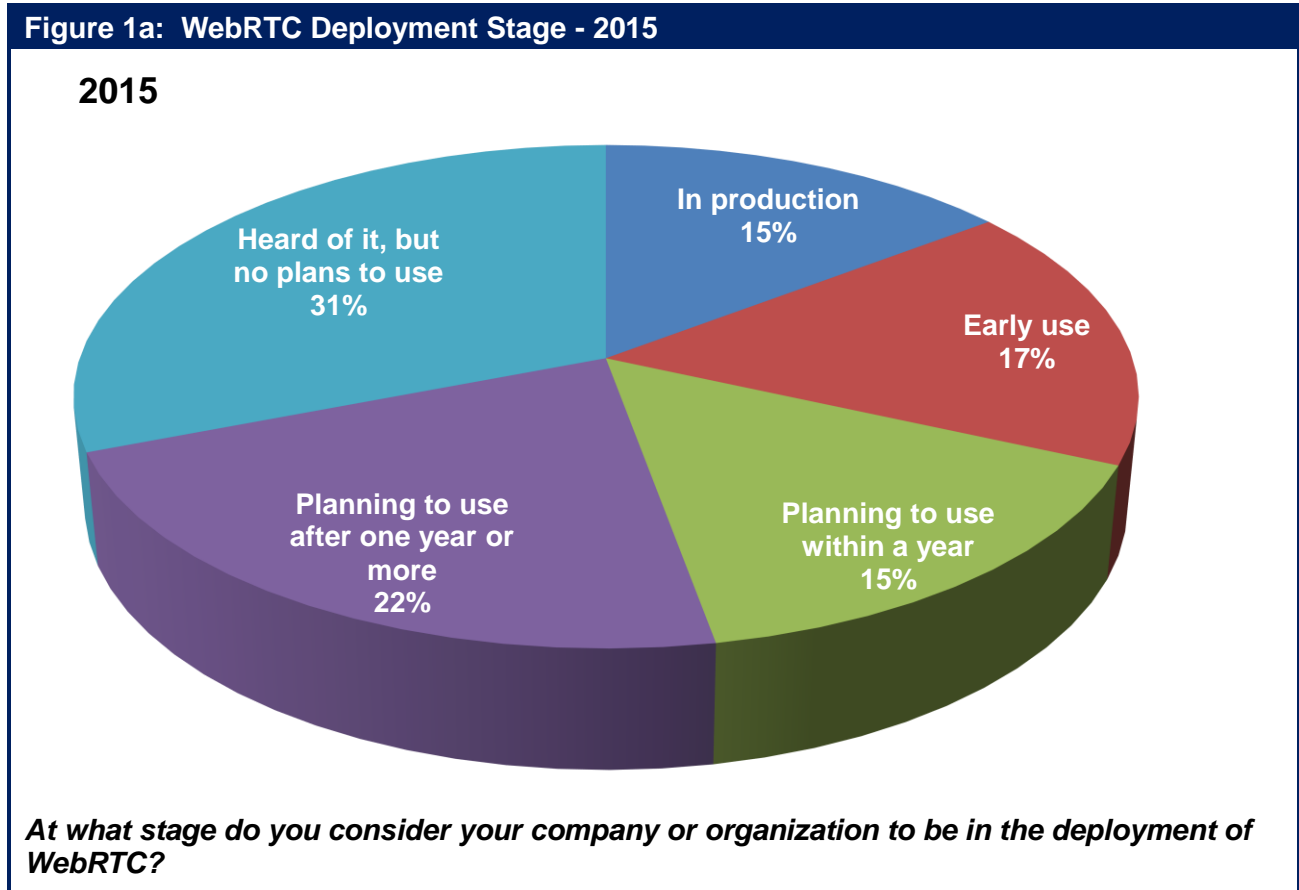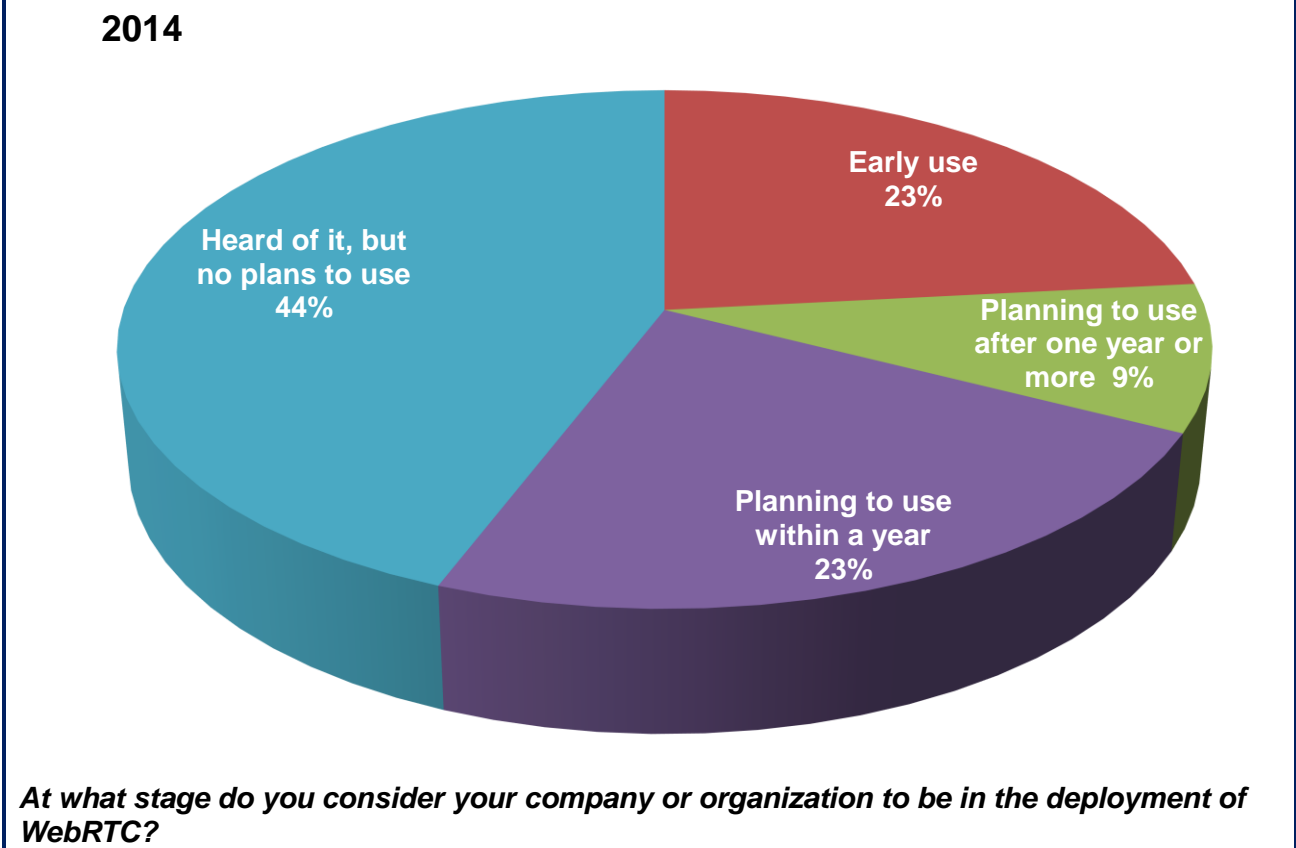
Figure 1a: WebRTC Deployment Stage - 2015

2015

At what stage do you consider your company or organization to be in the deployment of WebRTC?

Figure 1b: WebRTC Deployment Stage - 2014

2014

Early use
23%

Planning to use
after one year or
more 9%

Heard of it, but
no plans to use
44%

Planning to use
within a year
23%

At what stage do you consider your company or organization to be in the deployment of WebRTC?

Results from 2015 showed an increase of organizations that use or plan to use WebRTC compared to 2014, and "early use" also saw an increase, moving from 24% to 32% since the last survey. Last year, 56% of organizations surveyed had plans to use or were already using WebRTC. In 2015, 69% have already deployed it or plan to deploy it.   Counting those that already use or plan to use WebRTC: some 32% already use it and another 15% plan to use WebRTC within a year. Meanwhile, another 31% have heard of WebRTC but have no plans to use it. Another 22% are planning to use WebRTC after a year.

Conclusion: WebRTC is making the leap from early adopters to early mainstream users.

Collaboration Technologies

To understand the correlations between support for WebRTC and other technologies, we asked responding companies' about their current support for collaboration technologies such as VoIP and session border controller (SBC) deployments, voice and video conferencing, Google Apps, and BYOD (bring your own device).

As was the case in 2014, respondents to the 2015 survey have a higher percentage for using VoIP and SBCs than those of the general business population: 94% of those who completed the survey are using VoIP today, while 72% are currently using SBCs and 13% are evaluating the use of SBCs.

Voice and video conferencing use was also high among survey respondents. Nearly 97% or those who completed the survey said their organizations use voice conferencing, while 84% use video for external or intercompany communications and about 82% use video for intra-company conferencing.

Nearly all respondents represent companies that encourage BYOD, with 97% offering BYOD support.
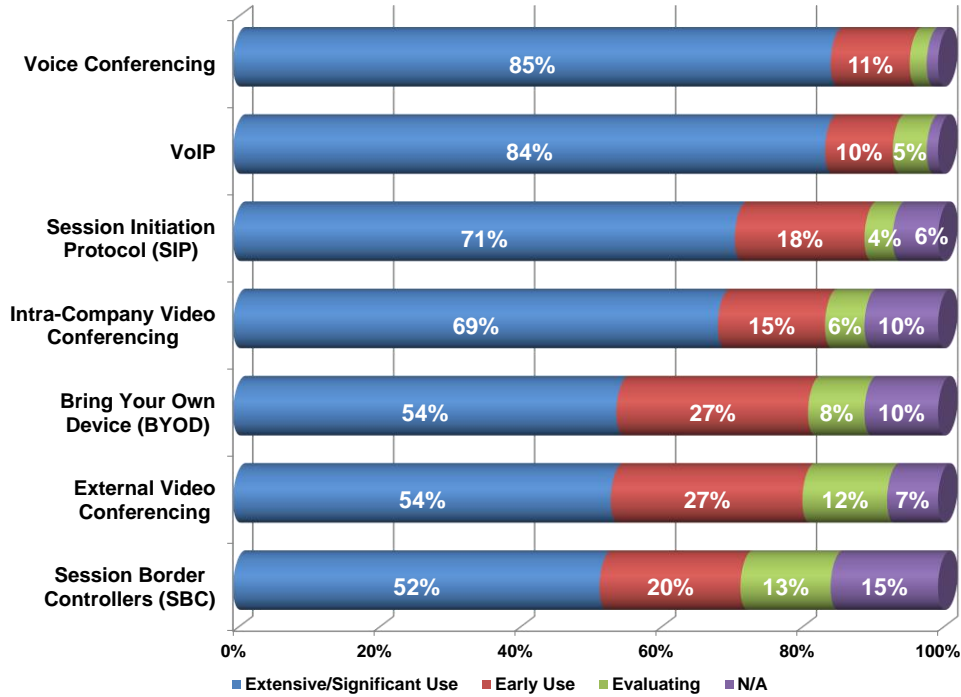
These results are nearly identical to 2014 technology deployments, with a slight 5% uptick in video conference support used for intra-company and other external collaboration. Admittedly, these high-use percentages of collaboration technologies among survey respondents are atypical of the general business population[1]. However, the data does suggests that users who have deployed collaboration technologies including VoIP, SBCs, voice conferencing, and video conferencing are more likely to use WebRTC than not.

These respondents also showed that, even if they choose not to use it, they are increasingly aware of WebRTC. In 2014, 30% of respondents who did not demonstrate a working understanding of WebRTC were excluded from the survey results, while only 22 % were disqualified in 2015.

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[1] While these percentages are somewhat atypical of the general business population, they are not at all surprising in that the surveyed base consisted of the Webtorials community, which tends to attract thought-leaders and early adopters.

Figure 2: 2015 Collaborative Technology Deployment

Technology	Extensive/Significant Use	Early Use	Evaluating	N/A
Voice Conferencing	85%	11%		
VoIP	84%	10%	5%	
Session Initiation Protocol (SIP)	71%	18%	4%	6%
Intra-Company Video Conferencing	69%	15%	6%	10%
Bring Your Own Device (BYOD)	54%	27%	8%	10%
External Video Conferencing	54%	27%	12%	7%
Session Border Controllers (SBC)	52%	20%	13%	15%

At what stage do you consider your company or organization to be in the deployment of these technologies?

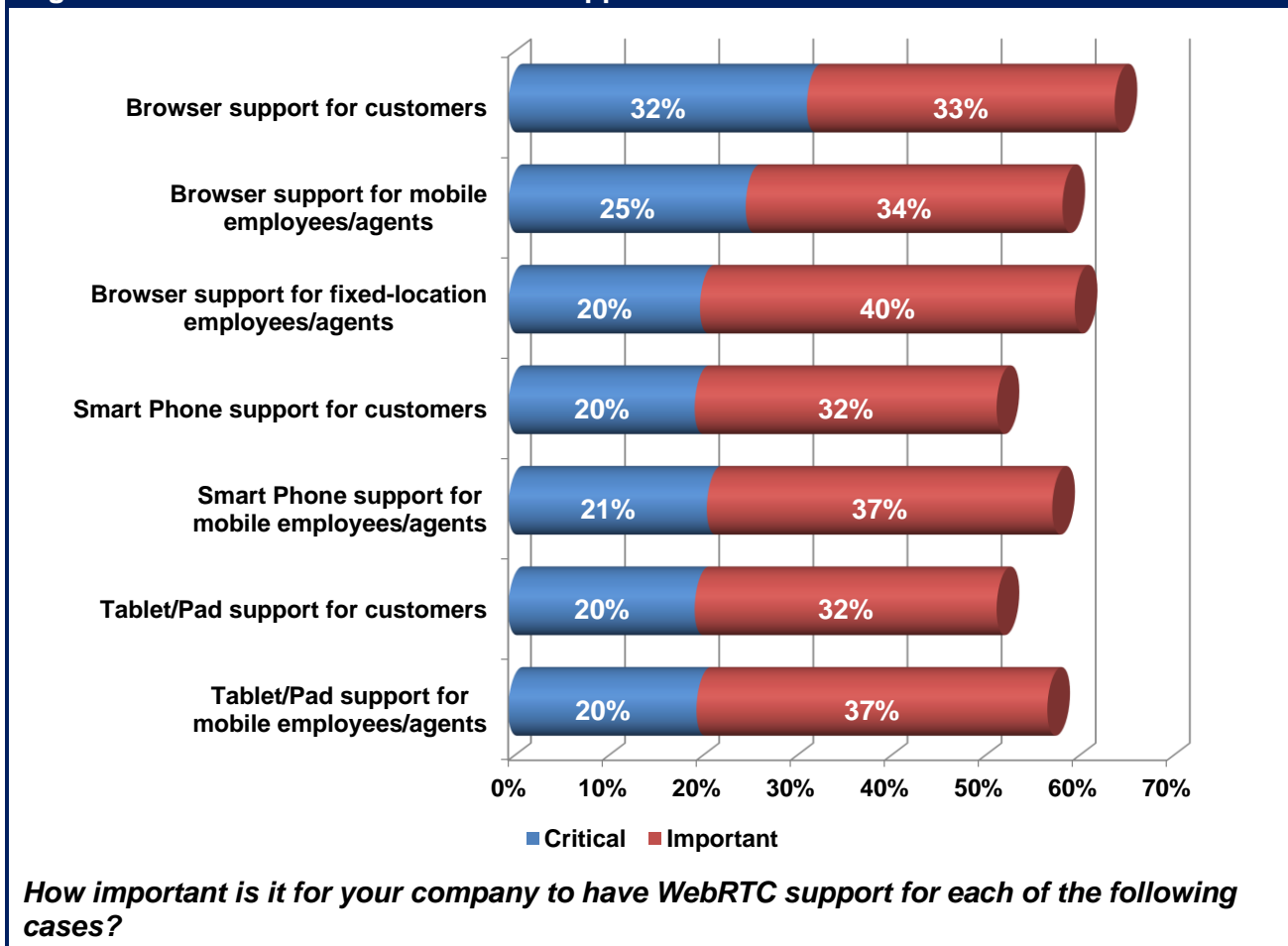| Analysis: Why this is important	*For those suppliers who offer or plan to offer WebRTC solutions, the existing adoption of collaboration tools is a leading indicator to qualify potential WebRTC clients.*
✔	

Browser and Device Support for WebRTC

Building on initial responses from the 2014 report, this year's State-of-the-Market report took a deeper dive into how organizations will use WebRTC for collaboration, including the relative importance of browser support and the need for WebRTC on mobile devices. When counting the need for browser support, 65% of respondents considered it critical to collaborate with customers, 60% considered browser support critical for fixed location employees, and 59% expected WebRTC to work with mobile browsers.

Figure 3: Browser and Mobile Device Support for WebRTC

Category	Critical	Important
Browser support for customers	32%	33%
Browser support for mobile employees/agents	25%	34%
Browser support for fixed-location employees/agents	20%	40%
Smart Phone support for customers	20%	32%
Smart Phone support for mobile employees/agents	21%	37%
Tablet/Pad support for customers	20%	32%
Tablet/Pad support for mobile employees/agents	20%	37%

■ Critical ■ Important

How important is it for your company to have WebRTC support for each of the following cases?

WebRTC support for mobile devices also continues to be important, providing access to employees and customers. In 2014, 85% of respondents noted that their organization supported BYOD, so it is not surprising that in 2015, 58% or those surveyed said WebRTC support was either critical or important on a smart phone, while 57% said employee tablets should also include WebRTC support. By a slight majority, respondents further consider it critical or important for customer smart phones and tablets to support WebRTC.
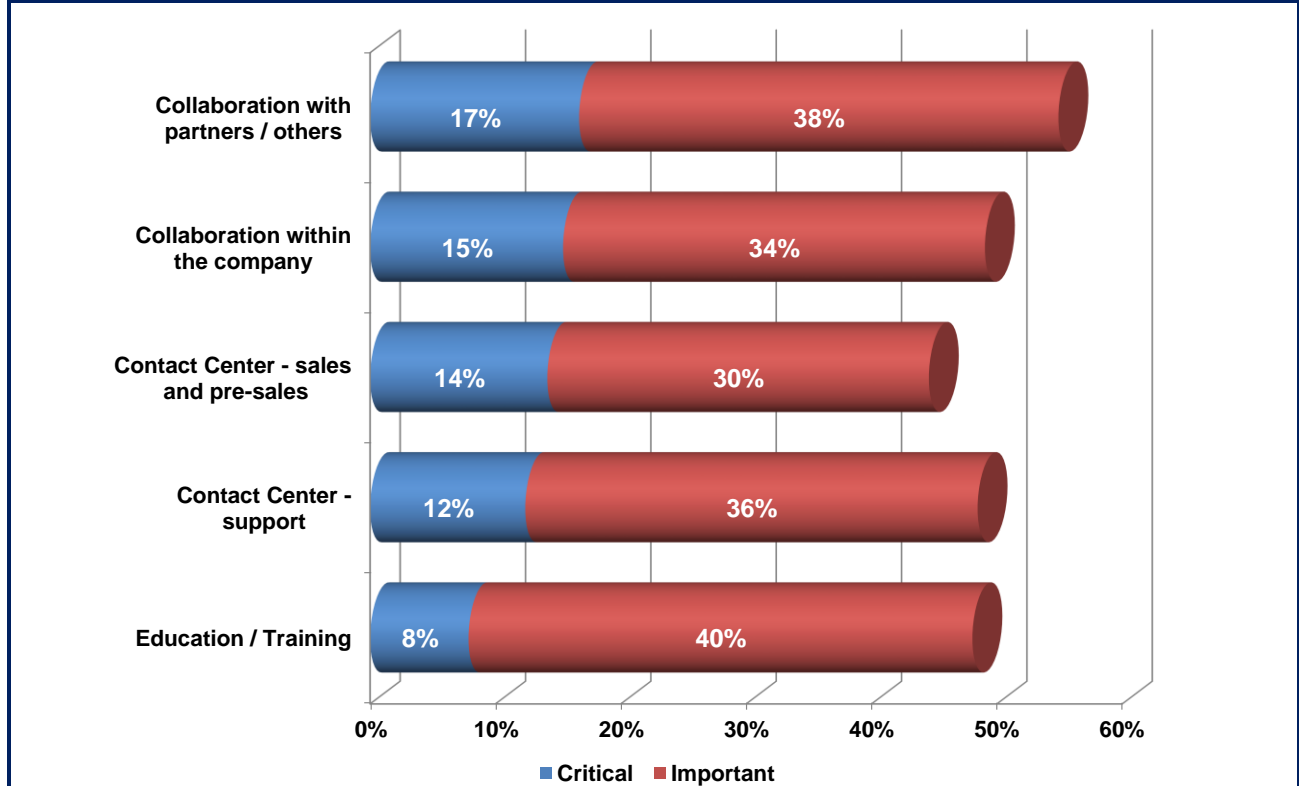
Analysis: Why this is important	Today, only Google Chrome, Opera, and Mozilla Firefox offer native support for WebRTC. Microsoft has promised native support for WebRTC in the future – an important factor since Internet Explorer is used more frequently than Chrome and Firefox. While organizations can control browser selection and support for employees or agents, browser selection for the customer is based on customer choice. Fortunately, most organizations support multiple browsers including Chrome and Firefox, and WebRTC applications can work using Internet Explorer or Safari when a WebRTC gateway is deployed. Gateways can also provide interoperability when a browser does not support WebRTC.

Leading Environments for WebRTC

WebRTC is a communications and collaboration protocol, and most survey respondents (54%) consider it important or critical for external collaboration. Just under half (49%) consider it critical or important as a tool for internal collaboration. Contact center operation also continues to be an important or critical environment needing WebRTC support.

Figure 4: Leading Environments for WebRTC Collaboration

Environment	Critical	Important
Collaboration with partners / others	17%	38%
Collaboration within the company	15%	34%
Contact Center - sales and pre-sales	14%	30%
Contact Center - support	12%	36%
Education / Training	8%	40%

■ Critical ■ Important

How important is it for your company to have WebRTC support for each of the following cases?

Analysis: Why this is important	*Unified communications and collaboration (UC&C) technologies that don't rely on WebRTC are already available, and most survey respondents have already deployed one or more of these technologies, as shown in figure 2 of this report. However, WebRTC can make some forms of collaboration easier and cheaper since connectivity is provided via a browser. WebRTC will supplement and be complementary to other UC&C technologies.*

WebRTC support was nearly as important for education and training environments as it was for the contact center according to 48% of respondents. Real life case studies, shown below, explain how contact center operations and education benefited from recent WebRTC deployments.

Pizza Hut Delivers with WebRTC

Pizza Hut franchisees rely on a WebRTC-based managed contact center solution provided through Intuitive Solutions. Originally, in-home agents used a VoIP solution to route incoming customer calls to agents, but with the WebRTC solution, agents now use a browser-based platform that includes a desktop agent complete with full phone features – eliminating the need for plug-ins or a separate telephony infrastructure.

Customer service agents connect to the Internet, then log into a secure website to access the customer service screen and to use a softphone to process customer delivery orders: the calls are routed directly via a web browser, eliminating the need for VoIP-based or legacy phone systems.

The LiveOps WebRTC solution also has integrated scheduling features and other apps needed to support the business.

Jim Mooney, vice president of operations at MUY! Companies (one of the U.S.A.'s largest franchise restaurant companies with 232 Pizza Hut locations) said in a statement that the WebRTC solution has enabled consistently increased "agent productivity in phone sales and customer service within the fast-paced restaurant industry."

Reimagining and Reinventing Education

Blackboard, a leading education technology company, is best known for supporting a range of collaboration and online learning tools. Blackboard is using the Requestec platform to reinvent and revitalize its educational product portfolio, using collaboration protocols such as H.323, SIP, HTML5, Flash, WebRTC, and a variety of video codecs. The platform also provides gateway capabilities to connect user devices that may have otherwise been incompatible, along with a media server to connect hundreds of simultaneous users in a single conference or virtual classroom.

Blackboard demonstrated how Requestec's WebRTC platform enhances educational collaboration at its user conference last summer. Commenting in a statement, Mark Strassman, Blackboard's SVP for product management, said, "WebRTC will revolutionize video conferencing as we know it. It will provide the best synchronous learning experience – better than anything that is available in the market today."
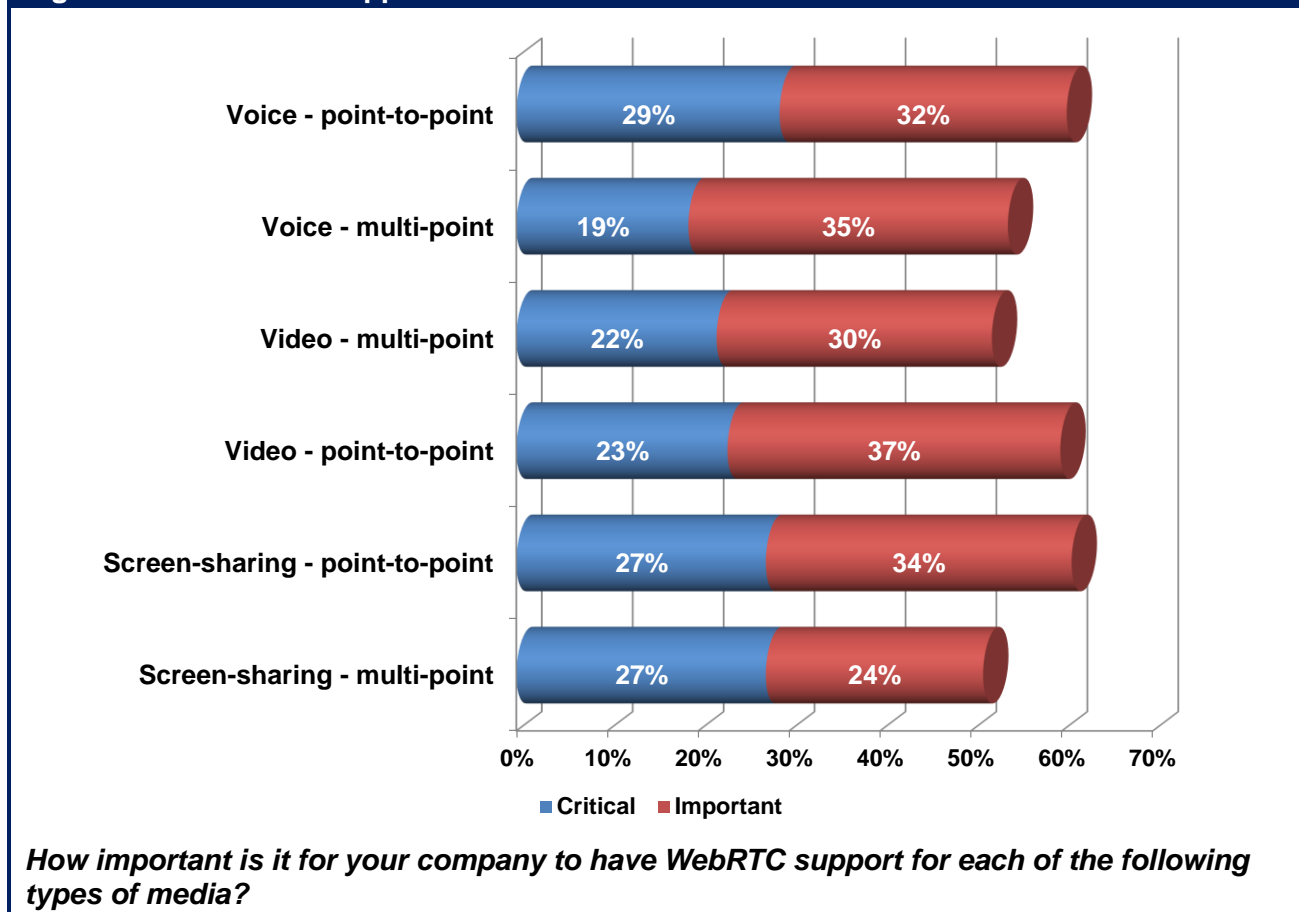
Strassman added that online educational programs are growing at 10 times the rate of traditional programs, with 100 million more learners expected to use global higher education system within the next decade. New features will also continue to evolve for Blackboard with a near-term focus on increased collaboration capabilities, improving workflows, and further refinements to the user interface.

Multi-Media Support for WebRTC

Voice and video communications continue to be important for organizations, evidenced by both 2014 and 2015 State-of-the-Market results, and WebRTC support is ranked as important or critical for these forms of media by over 50% of respondents including both point-to-point and multi-point communications.

Screen sharing technologies today typically rely on propriety platforms and third-party services like WebEx or Go to Meeting; however, in the future more than half of those also find that using WebRTC for screen sharing will be important or critical.

Figure 5: Multimedia Support for WebRTC

	Critical	Important
Voice - point-to-point	29%	32%
Voice - multi-point	19%	35%
Video - multi-point	22%	30%
Video - point-to-point	23%	37%
Screen-sharing - point-to-point	27%	34%
Screen-sharing - multi-point	27%	24%

How important is it for your company to have WebRTC support for each of the following types of media?

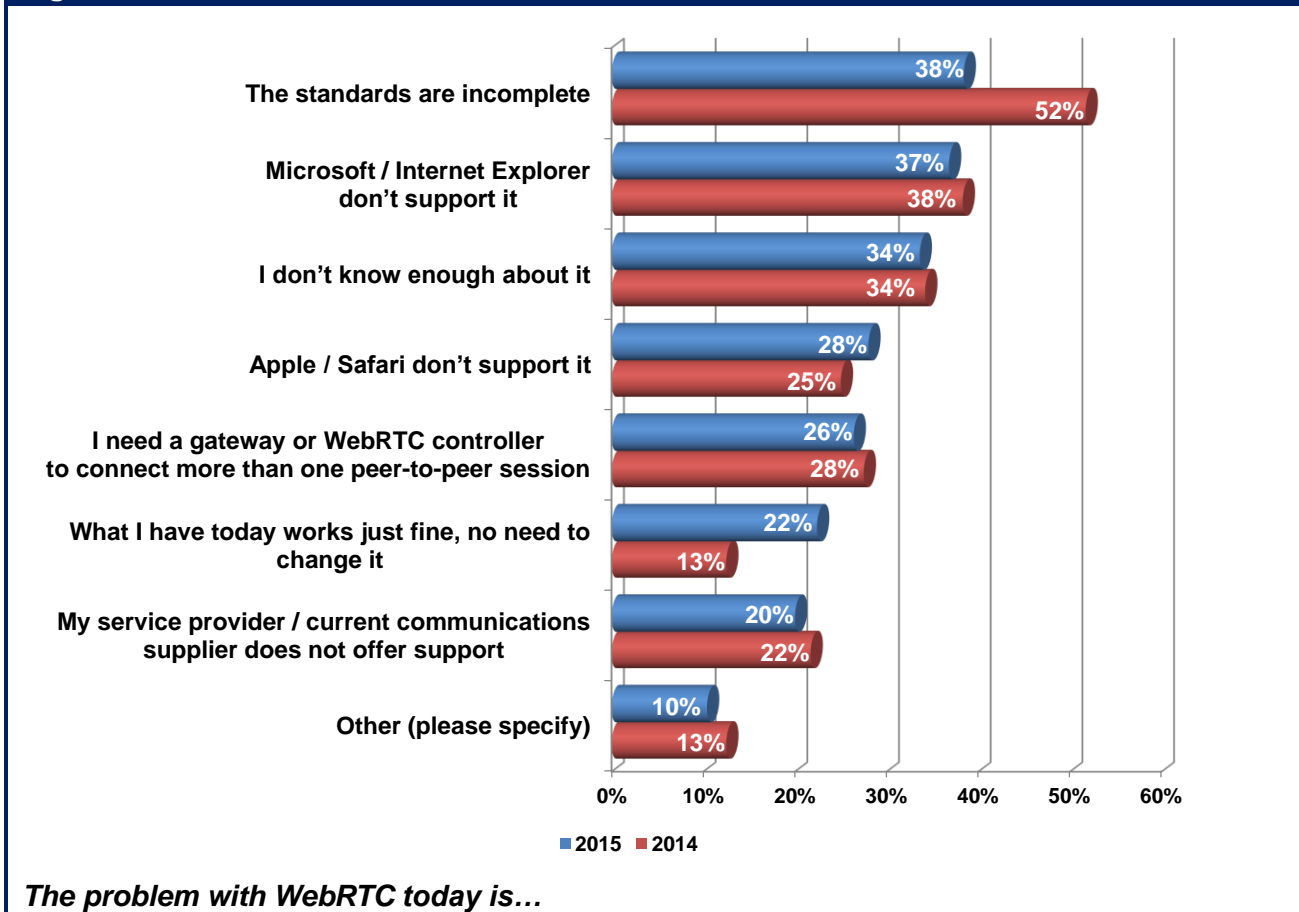| *Analysis: Why this is important.*	*WebRTC uses Session Initiation Protocol (SIP) for signaling; the same multi-media signaling protocol currently used by most commercial VoIP and UC&C solutions. Because WebRTC uses SIP to support VoIP and video, in theory session control for voice and video should be simplified. However, screen sharing is at least as important an application as voice and video, and WebRTC will need to bring together screen sharing along with communications protocols, especially for contact center environments*

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The Problem With WebRTC Is…

The biggest concern among respondents about WebRTC is that standards are not yet complete, with 38% identifying this as an issue to overcome. The good news is that this is down from the 52% of respondents had the same concern last year. The lower levels of concern represent reality because when the 2014 survey was taken, the technology community had not yet settled on a video codec standard – a standards issue that was solved in late 2014 with support for two video codec standards (including both H.264 and VP8).

Second to incomplete standards is concern that Microsoft has not deployed support for WebRTC; however, the lack of Microsoft support is not insurmountable. Further discussion of browser support is noted in the section below.

Most of the other concerns from 2014 lingered into 2015 with little change – except in a 7% uptick in respondents who said that what they have now "works just fine." This response is consistent with a broader understanding of what WebRTC can offer – and what it can't. In addition, because UC features have been more widely deployed over the past year, organizations already have a UC platform that offers robust real time communications features.

Figure 6: Issues with WebRTC

Issue	2015	2014
The standards are incomplete	38%	52%
Microsoft / Internet Explorer don't support it	37%	38%
I don't know enough about it	34%	34%
Apple / Safari don't support it	28%	25%
I need a gateway or WebRTC controller to connect more than one peer-to-peer session	26%	28%
What I have today works just fine, no need to change it	22%	13%
My service provider / current communications supplier does not offer support	20%	22%
Other (please specify)	10%	13%

The problem with WebRTC today is…

Is Limited Browser Support or Limited Mobile OS Support a WebRTC Barrier?

WebRTC is not currently supported by Microsoft's Internet Explorer (IE) or Apple's Safari web browsers: 38% of respondents consider that today's lack of IE support is a barrier to using WebRTC, while 28% feel the same about Apple Safari.

While Internet Explorer is still the prime choice (with "some" or "extensive" support by 88% of respondents), other browsers are also being used and supported by about three-quarters of responding organizations. For example, 74% of the respondents indicated "some" or "extensive" support for Mozilla Firefox and 72% indicated "some" or "extensive" support for Google Chrome — two browser options that sustain WebRTC applications today. The lack of support by Apple's Safari browsers seems a lesser concern as a WebRTC barrier to entry, with only about 46% of respondents indicating "some" or "extensive" support. When looking at the WebRTC support results for those who also support Chrome or Firefox in addition to IE vs. those who only support IE, the demographics were not materially different.

Between 2014 and 2015, organization IT support for Google Chrome has grown slightly year-over-year, while support for Mozilla Firefox has declined slightly. Browser support for last year and for 2015 is shown on next page in Figure 7.
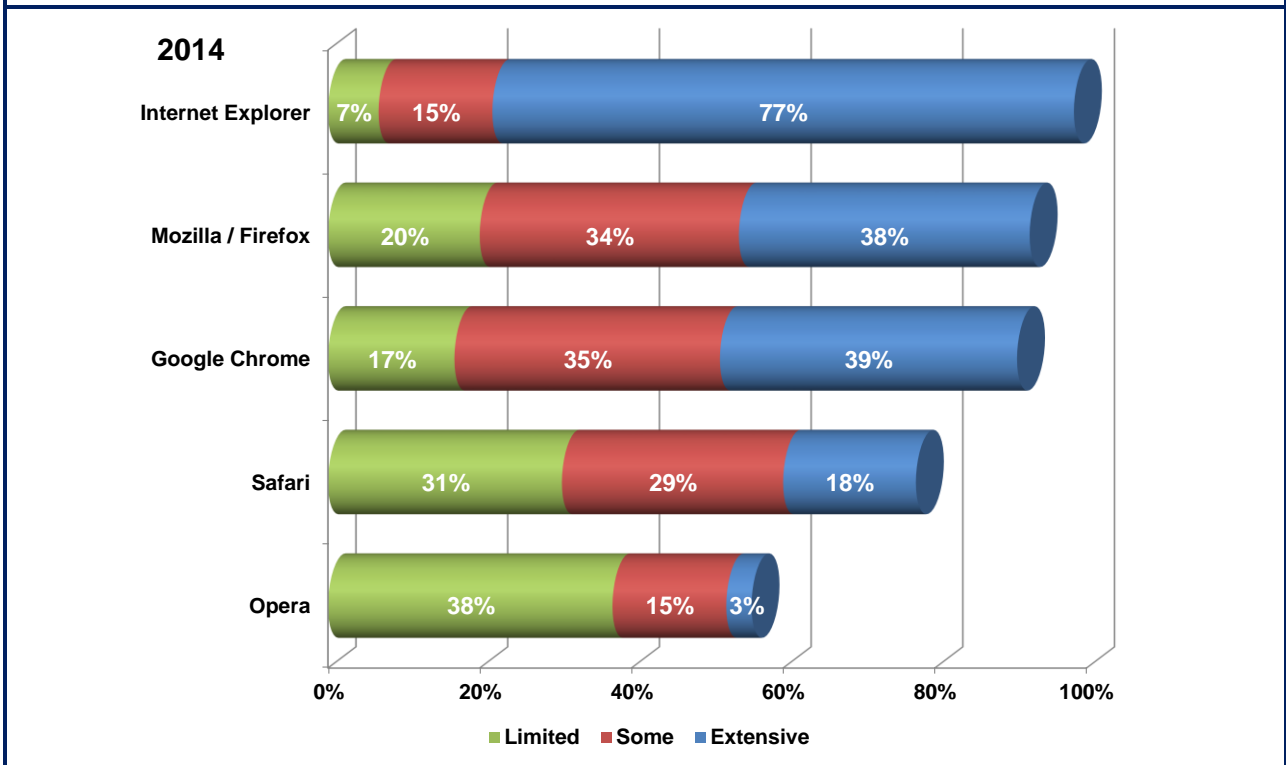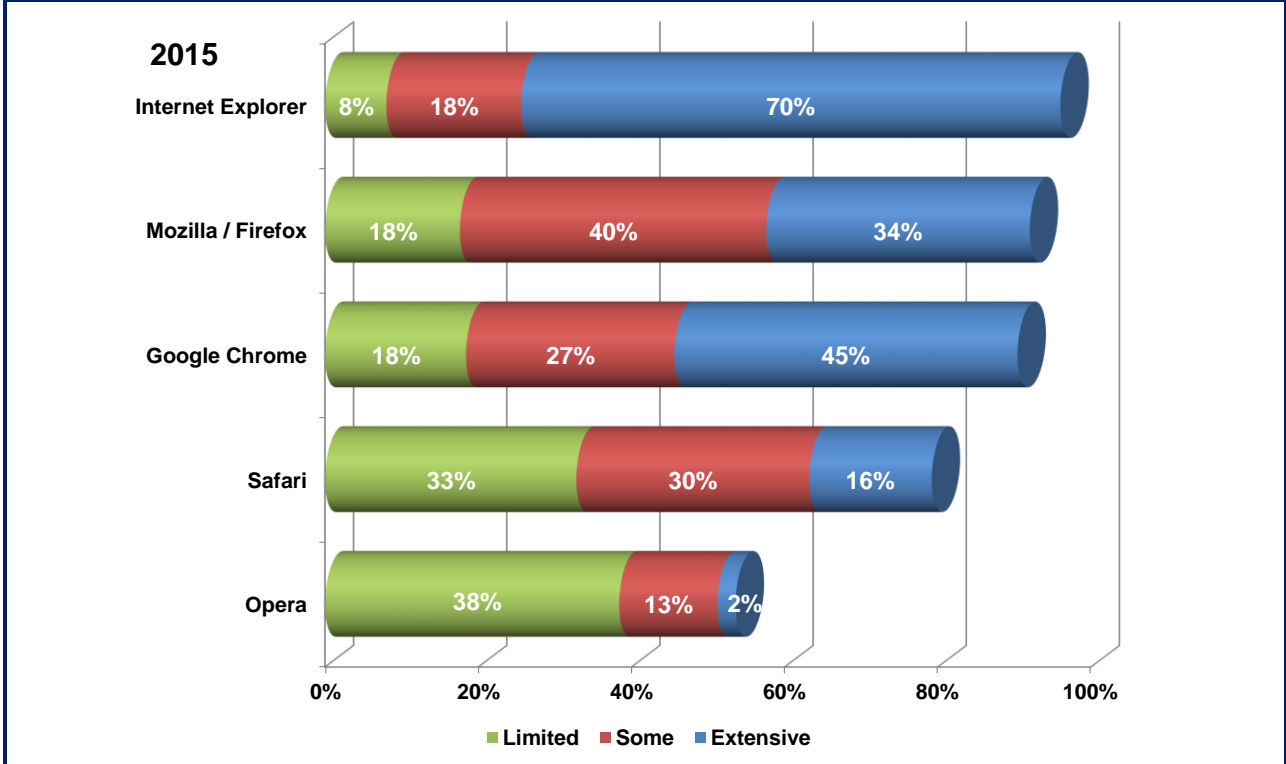
Analysis: Why this is important. ✔	Most companies surveyed use a Microsoft Windows, PC-based infrastructure for employees (evidenced by their support for Internet Explorer), so they can control browser support for B2B applications should IE support WebRTC, or by supporting Chrome and Firefox internally. The lack of Apple Safari support on mobile devices can be an even greater barrier, given the dominance of Safari as the leading mobile web browser platform. Premise-based WebRTC gateways and hosted WebRTC platforms can provide interoperability when a browser does not support WebRTC on one or both ends of the session.

Other WebRTC Roadblocks

Other concerns about WebRTC deployments were voiced in verbatim comments. These included:

- *None of these are real problems we are worried about*
- *Need business case*
- *No pent up demand*
- *Not very ubiquitous*
- *Security issues must be evaluated*
- *Sheer weight of existing estate (cost of change), and entrenched operational model. We change very slowly!*
- *People awareness, service provider awareness*

Figure 7: Browser Usage

2015

Browser	Limited	Some	Extensive
Internet Explorer	8%	18%	70%
Mozilla / Firefox	18%	40%	34%
Google Chrome	18%	27%	45%
Safari	33%	30%	16%
Opera	38%	13%	2%

■ Limited ■ Some ■ Extensive

2014

Browser	Limited	Some	Extensive
Internet Explorer	7%	15%	77%
Mozilla / Firefox	20%	34%	38%
Google Chrome	17%	35%	39%
Safari	31%	29%	18%
Opera	38%	15%	3%

■ Limited ■ Some ■ Extensive

To what extent does your company use and support each of the following?

Summary and Conclusions

Awareness about WebRTC and what it offers has grown by double digits over the past year. Respondents seem to be aware of all the WebRTC standards work that was completed in 2014 to help remove barriers to deployment; however, they still recognize that other real time communication alternatives have certain advantages.

Meanwhile, nearly half (47%) of respondents either have used or plan to use WebRTC in 2015- with an additional 13% of those surveyed this year who plan to use as some point in the future compared to 2014 responses. Interest in WebRTC as a protocol for external communications remains strong, with video calls / video conferencing, contact center communications, and education among the most likely ecosystems to use it.

With awareness high and plans by most respondents to use WebRTC, momentum is gaining for using the protocol as a solution complementing existing real time communications and collaboration environments.

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About Larry Hettick

Larry is the Editorial Director and a Senior Research Fellow at Webtorials. A thirty-year telecom veteran who has managed products for service providers and infrastructure supplies, he has provided industry analysis focusing on Unified Communications for the last 15 years. Before joining Webtorials, he spent a decade working with Current Analysis, where he remains a contributing analyst. Hettick also authors Network World's bi-weekly VoIP and Convergence Newsletter.

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