

Engaging the Nomad: Customer Live Assist for the Mobile User

How to Reinvent Customer Engagement While Using Existing Communications, Contact Center, and Mobile App Technology Investments

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Sponsored by



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Executive Summary

Customers show extreme loyalty to those companies that offer an excellent mobile experience, and most forward thinking organizations have invested in mobile application development as a way to better connect with their customers. More innovative companies are already crafting engagement-enabled mobile applications equipped with live assistance and self-service capabilities to deliver a transformational experience and drive very high levels of customer satisfaction.

With some forethought as to business process and back end supporting infrastructure requirements, organizations can and should build mobile applications that facilitate effective real-time engagement and readily integrate with existing enterprise communications and customer contact center investments. While it may seem counterintuitive to encourage live assist engagement due to the high cost of contact center agents, a cost/benefit analysis shows otherwise.

Most organizations want better engagement with their customers or clients, but knowing what to do and how to do it are not always clear. This paper provides an architecture and approach for doing so.

The Big Opportunity: Transforming Mobile Attachment into Mobile Engagement

Researchers estimate that, at the end of 2013, one in every five persons on earth owned a smart phone while one in every 17 persons owned a tablet¹. Furthermore, analysts predict that over 1.6 billion smartphones will be sold in 2014 accompanied by an additional 266 million tablets².

Mobile devices are accessed many times a day in order for people to stay informed and to maintain a sense of “connectedness”. A constantly present mobile device accompanied by continuous access often forms strong bonds or “mobile attachments”³ between users and their favorite smartphone or tablet, extending to the services that support them as well. These “emotional, even passionate, ties to an extremely broad range of products and services ... suggest that companies in almost any industry can attract life-long customers.”⁴

Customers show extreme loyalty to those companies offering an excellent mobile experience, and most forward thinking organizations have invested in mobile application development as a way to better connect with their customers. More innovative companies are already crafting engagement-enabled mobile applications equipped with live assistance and self-service capabilities that deliver a transformational experience and drive very high levels of customer satisfaction.

¹ Source: Business Insider, <http://www.businessinsider.com/smartphone-and-tablet-penetration-2013-10>, accessed on January 6, 2014.

² These data were computed by the author from Gartner and Forrester data tables available at <http://www.gartner.com/newsroom/id/2408515> and <http://www.idc.com/getdoc.jsp?containerId=prUS24314413>, as accessed on January 6, 2014.

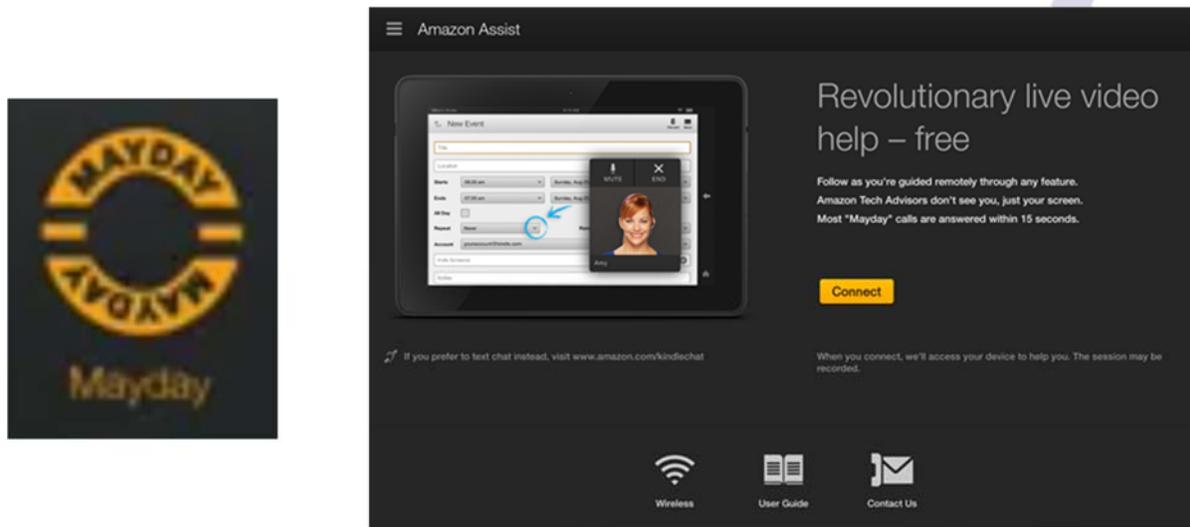
³ Meschtscherjakov, Alexander, “[Mobile Attachment: Investigating Emotional Attachment to Mobile Devices and Services from an HCI Perspective](#)”, Ph.D. Dissertation, University of Salzburg, May 2011.

⁴ Ibid, page 20.

An example of this type of customer engagement is found in the Amazon Kindle HDX. A simple “swipe down” from the top of the Kindle screen exposes a Mayday button, which when touched enables Amazon live customer assist.

By clicking on the “Connect” button, a Kindle user can be in live video contact with an Amazon tech support person within 15 seconds. The support agent can then provide helpful information including “how to” instructions as well as on-screen annotation and co-browsing.

Figure 1. The Amazon Kindle HDX Mayday button provides instantaneous live assistance (source Amazon).



The Mayday functionality illustrates how a company can take an existing mobile application and enhance it to provide better and timelier user engagement, all while continuing to use existing back-end infrastructure investments. In the Amazon Mayday case, the existing contact center infrastructure is reused.

Figure 2. The Amazon Mayday app integrates into Amazon's existing contact center infrastructure (agent image from Amazon).

Kindle Mayday App



- Contact Center
- Voice
- Video
- Some Context

With some forethought as to business process and back end supporting infrastructure requirements, organizations can and should build mobile applications that facilitate effective real-time engagement and readily integrate with existing enterprise communications and customer contact center investments.

Figure 3. With the right tools and design philosophy, well-crafted mobile apps can integrate into existing infrastructure including enterprise communications systems, databases, and contact centers.



Although it may seem counterintuitive to encourage live assist engagement due to the high cost of contact center agents, we will show later on what a cost/benefits analysis could look like. Before doing so, however, it is instructive to examine what the architecture for enabling live assist and better self-service looks like.

An Architecture for Mobile Live Assist

Most organizations have already deployed their own communications systems, contact center assets and databases along with public facing mobile applications. Therefore, any mobile live assist architectures must seamlessly interface with these existing assets and mobile development environments, and they must integrate mobile application capabilities with enterprises' communications and contact center environments⁵.

One of the cardinal rules for customer interaction is to keep the customer experience as consistent as possible and to keep the interaction and engagement contained within the capabilities of the mobile app. Interaction flows better when the customer does not need to change devices or interaction modalities. An obstacle to seamless customer engagement is when the user is required to download or launch an additional soft client or communications service to engage in a communication session. This means that interaction capabilities, such as chat, voice, video, and data, should be included within the app, which will usually require some sort of IP communications capability using the mobile device's data channel.

⁵ The contact center and the call manager may be coupled or decoupled, meaning that they can be purchased from different vendors. In the full diagram that appears below, if they are decoupled, and the contact center is independent, media and signaling would go from the SBC/gateway to both the PBX and the contact center.

On the enterprise side, interaction between a customer service representative and the mobile app user should also be done using existing workflow tools and devices. Thus, mobile chat should come into the enterprise using the enterprise's chosen enterprise IM/presence tool (examples include Cisco Jabber and Microsoft Lync, among others). Furthermore, voice and/or video communications between those in the enterprise and the mobile user should be done using already deployed call managers, phones, and video devices. Contact agent interactions with the mobile user should also be done through the agent's existing contact center interface and communications phones or softphones.

On the Mobile App Development Side

Mobile apps usually have good integration with back end databases and data-driven analytics engines. What most apps lack, however, is some type of real-time communications engine that enables engagement and interaction with someone in the enterprise. Therefore, on the mobile development side, there must be some sort of real-time communications module or capability that can either be built into the app or easily added through a software development kit (SDK) with an appropriate application programming interface (API).

A developer can build real-time communications into a mobile app in several ways. One method involves licensing the H.264 video codec and embedding that codec into the mobile application. Key advantages of this approach are that most mobile devices already have H.264 built into the mobile device hardware chipset, and when the video reaches the enterprise side, no gateway function is required. Another method is to utilize the newly emerging WebRTC standard under development jointly by the IETF and the W3C standards bodies. WebRTC is an acronym for Web Real-Time Communications providing wide-band, high fidelity audio, high definition video, and a data channel. Because WebRTC runs over the IP connection, it is another excellent framework for adding real-time voice and video to Web and mobile applications⁶, and it does not require browser plugins, so the communication experience becomes as seamless as possible.

Real Deployment

LIVE ASSIST FOR HIGH NET WORTH CLIENTS

A major financial institution has embedded CaféX Fusion Live Assist™ capabilities within its iPad app that is offered exclusively to high net worth clients. The client uses the app to review investment and market information provided by the financial institution. If a question arises, the client can tap a button that connects directly via audio and video to a financial advisor.

The financial advisors use a Cisco EX-60 video endpoint connected to the Cisco call manager for two-way video plus a PC that lets them see what the client was looking at, push documents or information to the client, and annotate the client's tablet screen.

Ten thousand clients and three thousand financial advisors will be enabled with live assist capabilities.

⁶ WebRTC is found today in Google Chrome and Mozilla Firefox browsers. However, the components of WebRTC are open sourced so that organizations can use the audio and video capabilities in applications at no cost other than the cost for development or the cost for a robust SDK with these capabilities built-in.

Figure 4. Real-time communications and live assist capabilities can be incorporated into a new or an existing mobile app through a communications SDK.

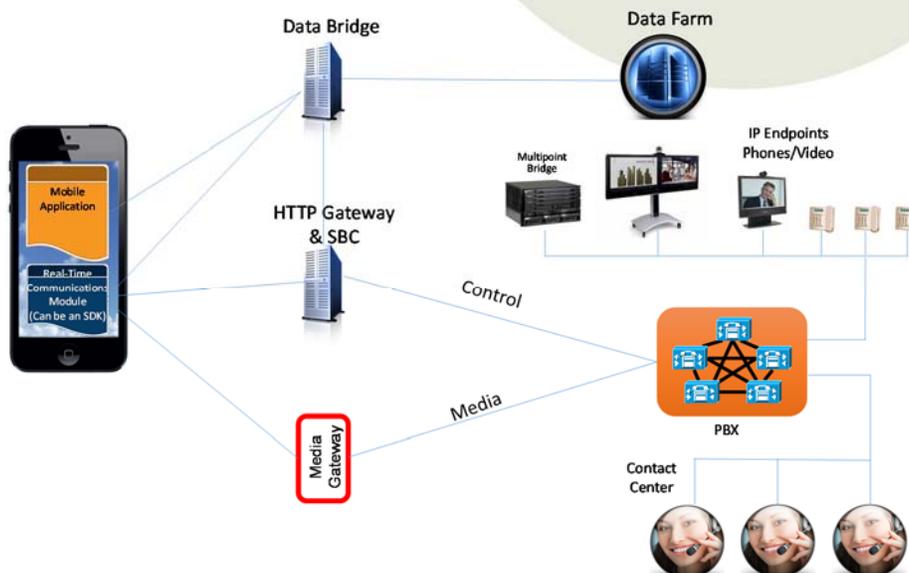


Using this type of framework, mobile application developers need only expose some type of interface mechanism that will allow the app user to invoke the real-time capabilities.

On the Enterprise Infrastructure Side

On the enterprise side of a live assist mobile application, gateways may be deployed which will allow the mobile app to interface with the existing communications infrastructure, the data back-end, and the contact center.

Figure 5. Adding live assist capabilities will require a database interface and two kinds of gateways: HTTP and a media SBC/gateway to interconnect with the communications systems used in the enterprise.



Two gateways are required, one for HTTP traffic and one for real-time voice and video traffic⁷. The HTTP gateway provides interoperability with Web servers and data systems, and the media gateway enables voice and video between the mobile device and an organization's communications system.

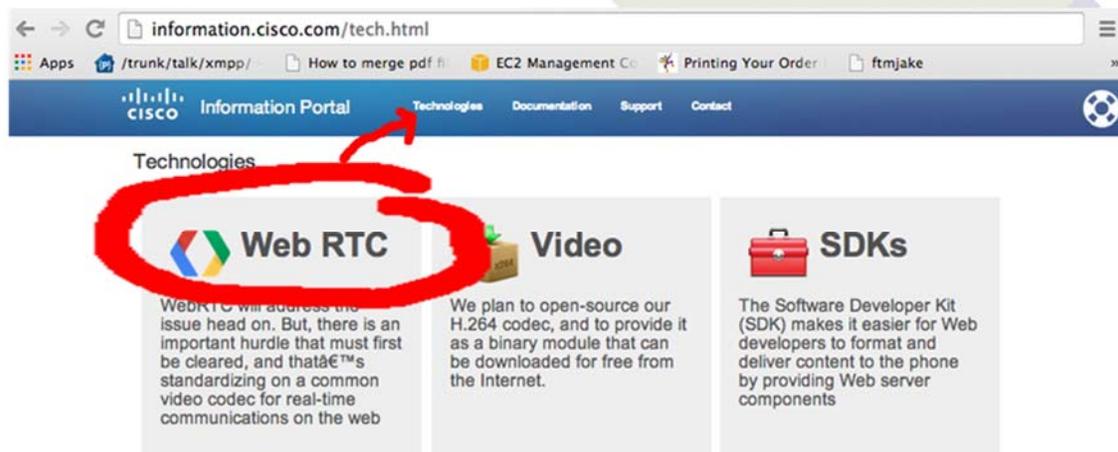
Depending upon how the mobile app is designed, chat messages from the mobile device can pass through the HTTP gateway and into the enterprise instant messaging solution. Furthermore, if the communication protocol setup messages (SIP, for example) are embedded within HTTP, then the HTTP gateway acts as a session border controller and communications proxy forwarding these SIP control strings to the PBX and other communications infrastructure.

Additional enterprise-side servers may be necessary depending upon what the mobile app does. For example, if the app is designed to provide the enterprise with context about how a person is using the mobile app or what the person has been doing or viewing, then a data server may be required that gathers this information from the mobile app and formats it in a way that will enable data integration with other back-end systems.

Such a server may also enable bi-directional data flows between the mobile app and other enterprise applications. Examples might include

1. Visual interactive voice response (VIVR) where the IVR tree is dynamically translated into a visual representation that is displayed by the mobile app to provide enhanced self-service to the user and therefore fewer calls to agents.
2. Co-browsing in which the agent and the user can see the same information.
3. Content pushing in which an agent can send documents and other files to the mobile app user, or annotation where in the live assistance agent can make annotations that show up on the interface of the mobile app. This experience can be rendered natively within mobile apps or Web pages to keep the user experience consistent and unified.

Figure 6. An example of annotation on a mobile app made by a live assist contact center agent.



⁷ If H.264 video and common audio codecs are deployed, then a media gateway may not be required. Nevertheless, some sort of session border controller for media would still be deployed.

Integration by Parts

It is important to point out that organizations wishing to implement a live assist solution need implement only those portions of that architecture that their business requires. For example, if voice and video are not necessary, but some context and data capabilities are, then only the data elements of the architecture need be implemented. Likewise, if only voice and/or video are important, the data elements do not need to be implemented. The needs of the business will dictate which functional parts of the live assist architecture are deployed. A phased approach will both mitigate risk and maximize return on investment.

CaféX: a Live Assist Solution that Fits This Architecture

CaféX Communications has built CaféX Fusion Live Assist™, which is a live assist solution based on the architectural principles previously discussed. Unlike the Amazon Mayday application that works only on the Kindle HDX device, the CaféX Fusion Live Assist software is device and infrastructure agnostic. It brings live assist engagement capabilities to various contact center and unified communication infrastructures as well as to iOS and Android mobile platforms, along with desktop-based browsers.

The CaféX offering has two component parts: Fusion Client SDK and Fusion Palettes. Fusion Client SDK extends enterprise unified communications capabilities into the mobile or web app, including voice, video, instant messaging and presence, document sharing, annotating, etc. Thus, when deploying CaféX Fusion, an organization that has rolled out a unified communications solution from Cisco or Microsoft continues to use its existing communications infrastructure. Furthermore, the people within the organization interacting with clients and customers who are using the mobile app continue to interact with them using the same phones, video units, and PC interfaces they use for internal communications.

Figure 7. CaféX Components: Fusion Client SDK extends enterprise unified communications to the mobile app while Fusion Palettes enables the exchange of user context with the contact center and contact center information with the mobile app.

The image shows a tablet displaying a mobile application form. The form is titled "Elevator of Form Application details" and includes a "To be completed for all applications" button. The form is divided into several sections:

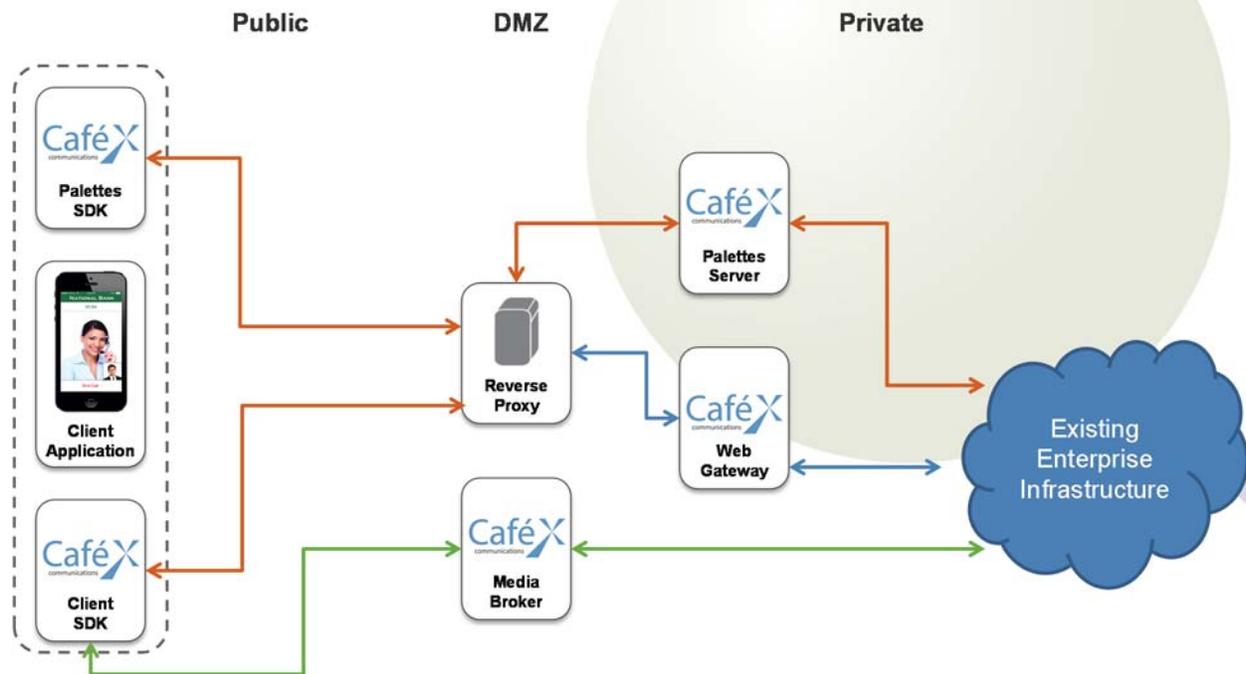
- Application summary**
- Person to be insured**
 - Is the Person to be insured also the Plan owner? No Yes
 - Title: Great name(s) Family name Previous name(s) (if applicable)
 - Mr James Bond
 - Gender: Male Female
 - Marital status: Single Married Divorced Widowed
 - Date of birth: 01/01/1990
 - Country of birth: England
 - Occupation title and the industry that the Person to be insured works in: Secret Agent Spy
 - Insurable income in last 12 months: (Please mention income after expenses but before income tax)
- Residential address (Person to be insured)**
 - Street number and name: 2 Fake street, Fake town
 - State: NSW
 - Postcode: 2000
 - Country: Australia
 - Home phone number: 02 9610 0078
 - Business phone number: 1300 795 654
 - Mobile phone number: 0417 654 321
 - Email address: fake@email.com
- Correspondence details**
 - Only complete this section if the address or correspondence address is different to the Person to be insured
 - Is the address for correspondence different to the Person to be insured? No Yes
 - Company / Self-managed superannuation fund: Fake fund
 - CO reg company identification: Fake officer
 - Title: Great name(s) / Previous name(s) (please print) Family name
 - Mrs Money Penny
 - Is the address for the correspondence different to the residential address of the Person to be insured? No Yes
 - Street number and name: 10-24 Skyfall, Fake town
 - State: NSW
 - Postcode: 2000
 - Country: Australia
 - Home phone number: 02 9610 0078
 - Business phone number: 1300 795 654
 - Mobile phone number: 0417 654 321

The Fusion Palettes component extends the contact center into the mobile app by enabling context passing, leveraging the contact center routing engine, and displaying visual IVR. Context passing includes information such as the identity of the person using the app (obtained via authentication into the app), what the person is currently looking at, what the person did previously in the app, and any other context-oriented capabilities that are built into the application. In addition, Palettes can expose contact center information into the mobile app by displaying items such as estimated wait time and queue lengths, as well as leveraging the routing rules that are held within the contact center. Thus, contextual information can be bi-directional: user information passed to the contact center and contact center information passed to the mobile app.

CaféX has chosen to use WebRTC on the mobile client side for voice and video. This is a futuristic move for CaféX because WebRTC is already deployed in over half of the world's Web browsers and on over a billion devices. So, although this document primarily focuses on mobile devices, the same Fusion Live Assist architecture works on PC desktops with no browser plug-in required⁸.

A fully capable CaféX Live Assist architecture includes Fusion Client SDKs and Palettes SDKs on the mobile app side and three servers on the enterprise side as illustrated in figure 8 below.

Figure 8. A typical CaféX architecture showing the SDKs on the mobile app side and three servers on the enterprise side⁹.



These servers run the CaféX software on off-the-shelf hardware, and they support the following functionality:

⁸ As of the date this paper was completed, WebRTC version 1.0 has not been ratified. Google Chrome and Mozilla Firefox browsers on PCs and Macs support WebRTC. However, Microsoft Internet Explorer and Apple Safari do not (yet) support WebRTC. CaféX has a WebRTC plug-in for Internet Explorer. Other third parties have Safari WebRTC plug-ins.

⁹ The Palettes and Web Gateway servers can actually be co-located. Additionally, an organization will most likely implement redundancy, so there will be least two physical servers for the Media Broker and two physical servers running the Web Gateway and the Palettes software servers.

1. Fusion Web Gateway: This gateway takes SIP control messages encapsulated in HTTP and acts as a sort of SIP proxy between the mobile application and the enterprise infrastructure. All control messages between the mobile device and the call manager or the contact center pass through this gateway. In addition, data is passed back and forth between the enterprise and this mobile app through this server. These data include the aforementioned types including instant messaging, presence, files, annotations, screen sharing and co-browsing, as well as authorized third-party capabilities such as electronic document signatures.
2. Fusion Media Broker: The media broker converts and adapts external media streams for the enterprise. It transcodes WebRTC audio and video into the audio and video protocols used by the enterprise communications system and the contact center. Media port multiplexing is provided along with (SRTP) termination, STUN termination, and RTP SSRC manipulation¹⁰.
3. Fusion Palettes Server: This server provides call center integration to support rich consumer information being passed from the mobile application to the contact center agent. Palettes also retrieves information such as estimated hold time to relay to a mobile application. Adapters are available for integration with several different contact centers, including those from Cisco and Genesys. In addition, the Palettes server can provide a renderer module to dynamically translate and display contact center & self-service / IVR VXML data in visual format within mobile & web apps.

Figure 9. The client side app interface from the high net worth client example previously mentioned.



¹⁰ SRTP is an abbreviation for “secure real-time protocol”, a common protocol used for sending and receiving voice and video over IP networks. STUN is an abbreviation for “SIP Traversal Utilities for NAT. STUN”. STUN is used to help real-time media streams traverse the enterprise firewall and NAT. SSRC is an abbreviation for “synchronization source”, and it is a part of the IP packet header in the real-time protocol that uniquely identifies the source of a media stream.

Live assist TCO Considerations

FINANCIAL CARD TRAVEL SERVICE

Several credit card companies provide numerous ancillary benefits to card holders including travel services. Often when a customer wants to use the card company's travel services, a call is made to a travel agent in a contact center owned by the credit card company.

In these situations, card members accessing the travel service through the mobile or Web app can engage in video collaboration with contact center agents. Cardholders are routed to agents based on cardholder status. The agent has the full context of what the cardholder has been browsing or looking at as well as the current screen being displayed.

The net impact is reinforced value of the card, better conversion rates, more upsell opportunities, deeper relationships with a dedicated travel counselor and higher agent efficiency.

For some years, the trend in contact centers has been to minimize, and insofar as possible, eliminate agent interaction with customers. Companies have tried to avoid agent interaction by deploying more and more self-service capabilities and by hiding customer support phone numbers. It is not surprising that many customers and clients loathe calling into a contact center because of the delays, requests to repeat information, frequent multiple transfers, non-native language speakers, and so forth.

However, it does not have to be that way. Well-crafted mobile apps that include high levels of self-service capabilities along with the ability to contact a live agent when necessary can be very effective if implemented properly. Moreover, they can actually save an organization money.

In the contact center, there are four main ongoing operations costs: 1) toll free carrier charges for when a customer calls in, 2) agent costs, including wages/benefits, annual training, and facilities/equipment, 3) IVR port maintenance charges, and 4) routine maintenance of the contact center underlying systems. Of the four, the one most impacted by live assist capability is the agent costs¹¹.

Performing cost savings calculations for the call center can be somewhat complex, but consider a high-level example of a live assist cost savings scenario¹²: Suppose a large call center with 15 million calls annually decides to deploy the CaféX Fusion Live Assist solution. Assume that the mobile application is adopted by 20% of those that would normally call in to the toll-free number during year 1, 30% in year 2, and 40% in year three (note: there are numerous ways to incent people to download and use the mobile app). In such a scenario, we assume that 70% of all appeals for help whether through the mobile app or through the toll-free number are resolved through self-service tools including IVR and visual IVR¹³. For the 30% that still come to a live agent, assume that only those calls coming in through the mobile app are handled more efficiently due to the capabilities of the live assist capabilities. This would represent approximately 900,000, 1.35 million, and 1.8 million calls in years one through three, respectively.

¹¹ Toll free charges and IVR port charges can be sizeable in a large contact center operation, and significant benefit can be obtained when reducing these charges through mobile app innovations, like visual IVR. However, the big savings occur when agents become more efficient. Calculations show that for a reasonable scenario, the benefit from both toll free savings and IVR port maintenance reduction is less than 10% of the total savings possible when agent efficiency savings are included. Hence, focus should be on reducing agent cost.

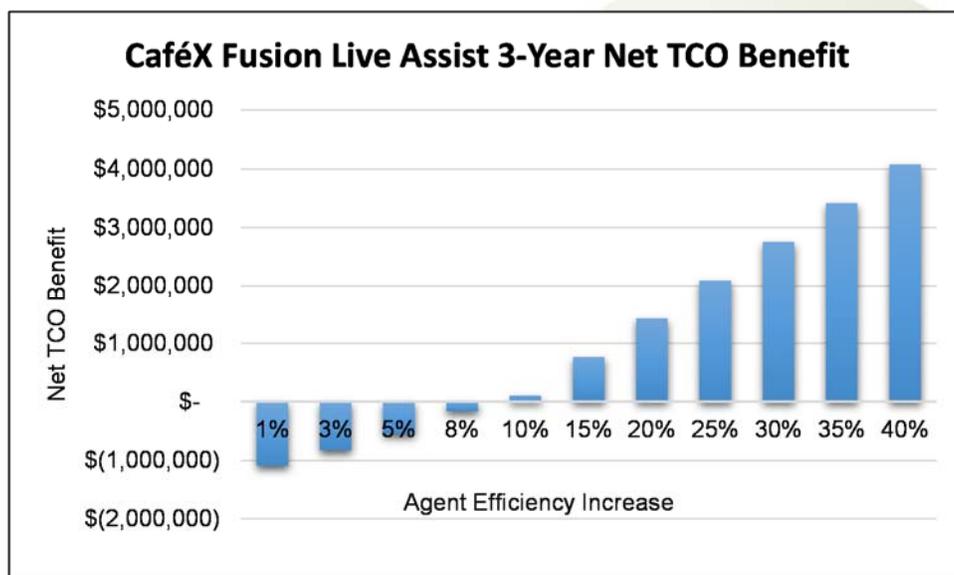
¹² The fine details of this calculation are available from the author.

¹³ Seventy percent is a reasonable number for call resolution using IVR or existing customer self-service tools.

In such a scenario, based on the list price of the Fusion Live Assist software/SDK and the benefits achieved, the breakeven point appears when agents achieve approximately 10% improved efficiency. By improved agent efficiency we mean that an agent can resolve a customer/client issue 10% faster by using the Fusion Live Assist capabilities of context, screen sharing, annotation, co-browsing, screen/keyboard control, etc. These computations are based on cost savings only, and do not include any additional savings or benefits, such as increased sales or up selling, higher customer satisfaction or Net Promoter Scores, and so forth.

While a 10% increase in agent efficiency may seem unreachable, we are aware of numerous large organizations that are choosing to deploy CaféX Fusion Live Assist because they see tremendous value in both the hard benefits and the intangible benefits that appear. If the agents can achieve higher than 10% efficiency improvements, then significant benefits accrue as illustrated in the TCO computations below.

Figure 10. CaféX Fusion Live Assist 3-Year TCO for increasing agent first call resolution and reducing average call handling times



The net takeaway from this TCO analysis is that significant hard savings are possible when live assist capabilities are interconnected to the contact center. Note that in this analysis, agents did not need any additional contact center software nor did they need to modify their phones or headsets. Furthermore, there were no additional hardware or software purchases required by the enterprise in order to integrate Fusion Live Assist voice, video, data, and engagement capabilities into the agent workflow that were not accounted for in the calculations. Clearly, some mobile application development would be required as well as integration with the contact center to exchange contextual information. In addition, some agent training would be required so that agents could use the Fusion Live Assist features effectively.

Actionable Recommendations

Most organizations want better engagement with their customers or clients, but knowing what to do and how to do it are not always clear. This paper provides an architecture and approach for how to do it. Given the proliferation of mobile devices and the emotional bonding people have with their devices, companies should consider how to provide a superior experience through a device people already love to use. Thus, we would make the following recommendations:

- Companies should evaluate all of the touch points they have with clients and customers, insuring that each provides a delightful experience.
- For those customer/client touch points that involve mobile devices and mobile applications, organizations should develop a strategy on how they will improve those experiences by leveraging the mobile devices and the apps that run on them.
- Think out of the box with respect to what can be done using mobile apps. Mobile apps can be powerfully sticky for customers if the app is well designed and useful to the user. Consider the benefits that can come to both the customer and the organization from live assist capabilities by integrating the mobile app experience with the existing enterprise communications system and/or with the existing contact center.
- Imagine what agents would be able to do if they had customer context as well as the ability to engage with customers or clients using video and collaborative tools like annotation, co-browsing, screen sharing, etc. Then design the interaction flows to maximize simultaneously agent efficiency and customer satisfaction.
- Consider whether visual IVR could help mobile customers more easily traverse the IVR tree with less frustration and with more accurate routing to the best agent to meet their needs.
- Work with vendors and their partners experienced in creating these integrated mobile apps. Make sure the solution architecture is similar to the one proposed in this document and get details about the requirements for integrating any vendor's solution with existing mobile apps, communications solutions, and contact centers, including protocols, devices, servers, and any middleware, if required.
- Ask for real reference case studies from companies similar to your own. Also, ask the vendor/vendor partner for a trial period using both the mobile software SDK and the back end system software and servers in order to get firsthand experience with the solution before there are any requirements to buy.

Opportunities abound for better engaging with customers and clients by taking advantage of the convenience and love affair people have with their preferred mobile devices. New live assist solutions, like the one offered in [CaféX Fusion Live Assist](#), can simplify development and deployment of such apps improving both the customer experience and corporate profits.

About the Author

Dr. Brent Kelly is Principal Analyst at KelCor, Inc. where he focuses on the intersection of technologies comprising unified communications, social business, video, cloud services and mobility. Dr. Kelly provides strategy and counsel to key client types: Chief Information Officers, Chief Technology Officers, investment analysts, VCs, technology policy executives, sell side firms and technology buyers.

Previously, Dr. Kelly served for two years as Vice President and Principal Analyst at Constellation Research, Inc. and for ten years as a partner at Wainhouse Research where he was the primary author of most of the firm's unified communications reports and forecasts.

Expertise

Dr. Kelly has experience as the Vice President of Marketing for Sorenson Vision, an early innovator in the IP communications space, and he has served as the chief executive in a privately held manufacturing company. Prior to this, Dr. Kelly was part of the team at Schlumberger that built the devices Intel used to test Pentium microprocessors. He also led teams developing real-time data acquisition and control systems, and adaptive intelligent design systems in several Schlumberger Oil Field services companies including 4 1/2 years doing R&D in France.

Dr. Kelly has worked as a research engineer for Conoco, implementing more efficient mathematical convergence methods for oil reservoir simulators, and as a process engineer for Monsanto. He has also worked as an assay technician in the mining industry. Dr. Kelly is serving a second term as an elected official in his community.

Media Influence

Dr. Kelly is a regular presenter at Enterprise Connect (formerly VoiceCon), the communications industry trade show where his well-respected tutorials have covered topics such as hosted and managed unified communications services and Microsoft Lync/OCS technical deep dives. He is a main organizer of the phenomenally successful all day technical tracks on WebRTC at Enterprise Connect. Dr. Kelly also contributes thought leadership articles regularly to NoJitter.com.

Education

Dr. Kelly has a Ph.D. in engineering from Texas A&M University specializing in thermodynamics and a B.S. in engineering from Brigham Young University.

About KelCor

KelCor (www.kelcor.com) is a specialized consulting and analyst firm with a passion for providing client satisfaction through product and service excellence. We have laser focus on the business communications market, emphasizing those products and services that are proven to accelerate an organization's business processes.

We provide value to our end-user and vendor clients by offering an unbiased, 360° view of the unified communications and collaboration marketplace. We prepare research reports, vendor profiles, market forecasts, white papers, case studies, and presentations designed to inform, educate, and assist vendors with strategy, tactics, market approaches, and end user attitudes to help them identify and capitalize on opportunity. We help our end-user clients understand options, strategies, competitive vendor offerings, and best practices engaging our collaborative process engineering expertise, all designed to improve organization efficiency while increasing top line revenues or bottom line profits.

The depth of our reports and our ability to discern key market trends significantly differentiates us from any other consulting and analyst firm you've ever worked with.