RAISING THE BAR FOR TEAMWORK PRODUCTIVITY WITH THE COLLABORATIVE CONVERSATION EXPERIENCE

ALCATEL-LUCENT OPENTOUCH SUITE
FOR MID-SIZED AND LARGE ENTERPRISES:
CONVERSATION EXPERIENCE DIRECTIONS

APPLICATION NOTE

AT THE SPEED OF IDEAS™

Alcatel·Lucent
Enterprise

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ABSTRACT

The workplace is being redefined, with virtual workspaces distributed among physical locations. Employees increasingly require a mix of personal and professional applications, and "bring your own device" (BYOD) is becoming the norm for business communications.

The Alcatel-Lucent OpenTouch™ Suite for Mid-sized and Large Enterprises (MLE) features an integrated, virtualized Session Initiation Protocol (SIP) platform that enables native multi-party and multimedia collaborative conversations on any device (Multi3). Employees can connect to and exchange rich, context-based information without compromise on security or quality. They can retrieve a mix of their personal and professional features on the devices they choose, build their personal clouds[1], and shift between devices to adapt to the conversation context.

Conversation-based business practices will evolve toward customized routing, increased mobility and multimedia content, and an expanded application ecosystem for service creation environments.

MOVING TOWARD CONVERSATION-BASED BUSINESS PRACTICES FOR ENTERPRISE COMMUNICATIONS

With recent developments in communications, professionals are becoming sophisticated users of technology. Innovations are enabling conversation-based business practices and personal clouds, which employees build using devices that are feature-rich and simple to operate. Without compromising efficiency, employees can now perform business tasks as easily from their smartphones as from their desktop PCs.

Redefining the workplace

Workspaces are being redefined as virtual places distributed among physical locations: office, home, or any place while an employee is on the move. Working from home is now common, allowing employees to reduce their daily commuting time. For example, in the United Kingdom (UK), total commuting time increased by 18 percent between 1997 and 2011 while employees who work from home saved an average of 38 minutes per day.[2] The immediate benefits are decreased stress, transportation costs and energy consumption.

Enterprises are taking advantage of this shift by offering efficient open-plan shared offices, leveraging virtual desktop environments, and decreasing overall space requirements. Moreover, enterprises can decrease their operating expenditures (OPEX) with lower rental fees and diminished travel costs for meetings.

"The use of smartphones and advanced network technology has made access to the office easier than ever, resulting in more companies embracing the work-from-home option and more workers putting in full-time hours from inside their own house."

Rosemary Haefner,
CareerBuilder
Vice President,
Human Resources

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1 A personal cloud is a virtual space from which a user's private and/or public content and applications are
permanently available from any place, on any device. http://www.businessnewsdaily.com/1468-work-from-home-jobs.html
2 Economic and Social Data Service, *Quarterly Labour Force Survey*, Universities of Essex and Manchester, 2011

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Reconciling IT with business line requirements

With cost containment, security policies and siloed proprietary technologies, chief information officers (CIOs) often used to be the gatekeepers for employees' access to technology. Now, new standards of consumer communications are dictating how CIOs should service business lines.

The trend toward BYOD is probably the most visible sign of enterprises' fundamental paradigm shift. Employees increasingly require a mix of personal and professional applications available through the devices they choose, allowing them to perform professional tasks while keeping in touch with both their business and personal communities.

Enhancing team productivity in the virtual workplace

IT toolboxes are now richer than ever, offering greater flexibility and simplification for increased productivity in the virtual workplace:

- Large scalability schemes allow the concentration of network intelligence in data centers.
- Virtualization is enabling flexibility and savings on hardware.
- New communications software is improving adaptability to business requirements.

With these tools, enterprise IT managers can implement new cloud-based, premises-based or hybrid strategies to increase the agility of delivery modes for their business line customers. Integrated and unified solutions based on open standards are enabling rich multimedia conversations that span organizations with no compromise on security.

ALCATEL-LUCENT OPENTOUCH TRANSFORMATION FOR NEXT-GENERATION BUSINESS CONVERSATIONS

As a leading vendor of enterprise communication technologies,[3] Alcatel-Lucent is moving forward with innovations to smoothly accompany organizations throughout their transformation. Virtualization, security, voice and data convergence and softwarization will set the foundation for future communications as a service (CaaS) delivery.

The award-winning[4] Alcatel-Lucent OpenTouch™ Suite for Mid-sized and Large Enterprises (MLE) raises the bar for workplace communications, enabling native multi-party and multimedia collaborative conversation on any device (Multi³)[5]. The new Multi³ technologies are paving the way for the next generation of enterprise communications to create agile architectures, services and solutions.

From an architecture perspective, Alcatel-Lucent supports the convergence of voice and data solutions with BYOD-ready networks that ensure end-to-end security, seamless management, stability, and the capacity for business conversations.[6] The Application Fluent Network, with unprecedented agility in solution delivery, opens the door for enterprises' long-term transformation strategies.

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3 Positioned in "Leaders" quadrant in *Magic Quadrant for Corporate Telephony*, by Jay Lassman, Steve Blood and Geoff Johnson, Gartner® Inc., September 15, 2011
4 Award examples: Best of Interop 2012 Collaboration Winner, Frost & Sullivan 2011 "Most Innovative European Communications Product of the Year"
5 Alcatel-Lucent, *Alcatel-Lucent OpenTouch Suite for Mid-sized and Large Enterprises: Blueprint*, July 2012
6 Alcatel-Lucent, *Enterprise Communications 2.0: Embracing the bring your own device trend to improve employee productivity*, July 2012

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By implementing Alcatel-Lucent CaaS and solutions, IT departments can build their own enterprise app stores and deliver a wide range of flexible solutions to their business line customers. With the new generation of business conversations, employees will be able to build their own personal clouds, connecting personal apps and content with enterprise applications for optimal productivity.

At the applications level, the open Alcatel-Lucent architecture enables hybrid delivery models and deep integration with the enterprise business ecosystem. Context-based location, presence and skills information will improve conversation performance. Innovations at the media and session management level – for example, immersive video and gesture capture – will increase the effectiveness of people's interactions.

In the future, IT departments will have enterprise-grade application portals from which employees will be able to retrieve the services they need to perform business tasks on the devices they choose. Employees will be able to retrieve and exchange rich, context-based information without compromising security or quality.
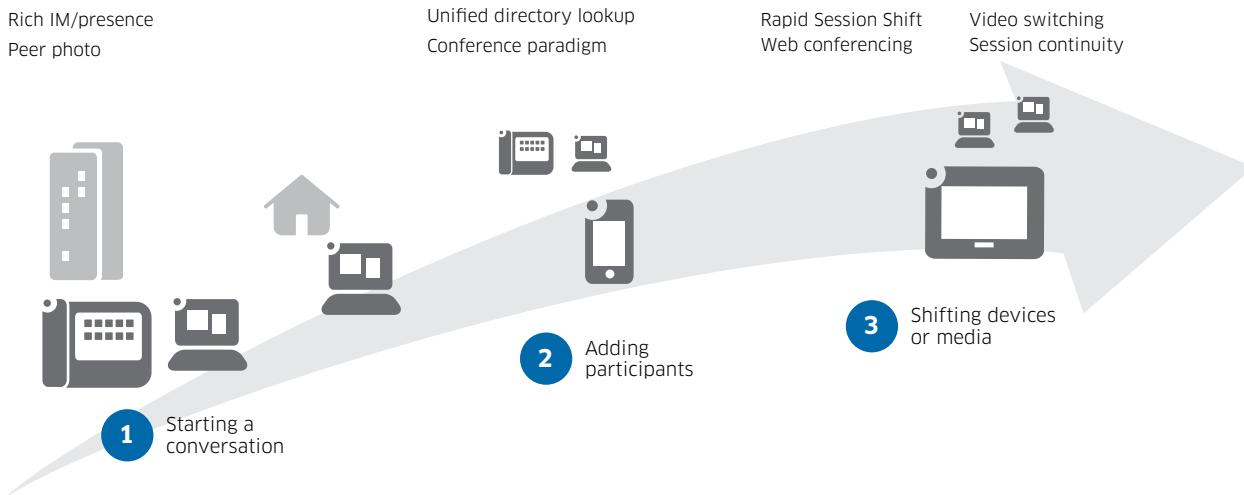
THE ALCATEL-LUCENT CONVERSATION EXPERIENCE

The new virtual workplace can be defined as the collection of places from which employees can easily access their professional applications, including real-time communications, on the devices they choose. The Alcatel-Lucent OpenTouch Suite for MLE enables employees in the virtual workplace to reach out to their business community with Multi[3] conversations. Employees can retrieve a mix of their personal and professional features, build their personal clouds, and shift among devices to adapt to the context.

Collaborative conversations in the virtual workplace

Figure 1 shows an example of a three-phase conversation in a virtual workplace. Employees can access their business conversation paradigm from any place and through any device. Their conversation experience is part of their personal cloud of experience.

1. Starting a conversation: An employee starts the voice, Instant Messaging (IM) or video conversation without concern for where the other person is located. Using an Alcatel-Lucent OpenTouch client, any user can set his/her availability and apply the most relevant routing strategy to his/her profile, increasing "one number" service possibilities.
2. Adding participants: At any time the conversation can expand to a larger audience with no interruption.
3. Shifting devices or media: The conference can be switched to any device with no interruption. The conversation can also be escalated to other media to adapt to the users' context and to enable richer content such as HD video, document sharing and whiteboarding.

Figure 1. Conducting efficient business conversations throughout virtual workplaces

Rich IM/presence
Peer photo

Unified directory lookup
Conference paradigm

Rapid Session Shift
Web conferencing

Video switching
Session continuity

1 Starting a conversation

2 Adding participants
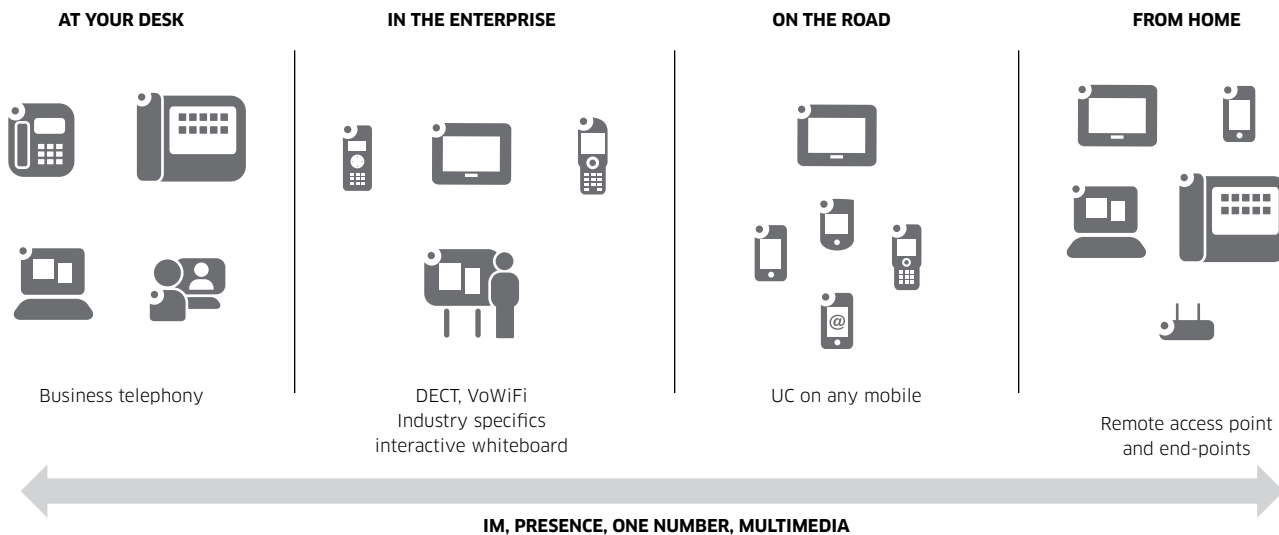
3 Shifting devices or media

Delivering the conversation paradigm to employees over any interface

Alcatel-Lucent is helping employees to build an efficient working environment that adapts to any circumstance. The Alcatel-Lucent OpenTouch Suite for MLE delivers real-time conversation applications to which the enterprise has subscribed. Conversations occur between users, independent of their devices: the device is only a tool — an interface for interacting with others — while conversations are interpersonal — not device-to-device — communications.

The Alcatel-Lucent OpenTouch Suite for MLE simplifies business relations because users manage their own interfaces and no longer have several identities (device numbers). The interface for conversations can be on enterprise premises, on dedicated devices, in home or remote offices, or from any location (see Figure 2):

- On enterprise premises: Fixed desk phones deliver always-on high quality voice in offices, meeting rooms and other locations where the continuity of communications is critical. Desk phones are available with analog, TDM, IP or SIP connectivity. Digital Enhanced Cordless Telecommunications (DECT™) or wireless LAN (WLAN) mobile phones offer on-site mobility for campus roamers. Additional devices designed for specific environments are also available — for example, man-down and explosion-proof DECT phones — to ensure employees' safety.

- On dedicated devices: Because conversations are not limited to users' endpoints, Alcatel-Lucent OpenTouch enables shifts to other devices to benefit from richer capabilities. For example, video and whiteboard in-room equipment can be used as conversation devices.

- In home or remote offices: Remote workers can benefit from the same environment as in the enterprise premises through dedicated Remote Access Points (RAPs) or by leveraging the software Session Border Controller (SBC) of the Alcatel-Lucent OpenTouch platform.

- From any location using dedicated applications: Client applications are available on personal computers (Microsoft® Windows®, Apple® Mac OS®), smartphones (RIM® BlackBerry®, Google™ Android™, Apple iOS, Microsoft Windows Mobile®, Symbian®) and tablets (Apple iPad®).

Figure 2. Alcatel-Lucent OpenTouch Suite for MLE: interfaces for virtual workplace conversations

AT YOUR DESK   **IN THE ENTERPRISE**   **ON THE ROAD**   **FROM HOME**

Business telephony

DECT, VoWiFi
Industry specifics
interactive whiteboard

UC on any mobile

Remote access point
and end-points

IM, PRESENCE, ONE NUMBER, MULTIMEDIA

Delivering on new teamwork standards

Employees' expectations about teamwork and collaboration have completely changed
with redefinition of the workplace and the emergence of new quality standards for
private communications. Employees can now share their thoughts and content with a
large community using HD audio and video media as well as group-capable IM, similar to
their use of popular social network applications such as Facebook, Twitter or LinkedIn®.

Employees will succeed in performing their business duties from anywhere if they can
easily access and use multi-party, multimedia tools. Alcatel-Lucent OpenTouch provides
service simplicity, media performance and easy connectivity to enable efficient team-
work. Incorporating new teamwork standards, successful business collaboration consists
of four major elements:

• Management and mobilization of communities
• Anywhere access to conferencing services
• High-quality multimedia capability
• Management of conversation histories

Managing and mobilizing communities

Employees can manage their many communities by creating lists of favorites, retrieving
their personal contacts in the Alcatel-Lucent OpenTouch conversation environment, and
performing easy lookups in the company directory. Transparent to others, employees
can configure their own presence and routing strategies with details per media and per
device. Setting up a conversation is easy so that virtual teams can collaborate immedi-
ately. Moreover, calendar integration enables efficient scheduling.

Providing anywhere access to conferencing services

Alcatel-Lucent OpenTouch audio-, web- and videoconferencing can be delivered to
all employees in the virtual workplace. There is no need for additional servers on the
platform side or dedicated devices on the client side except for specific uses, such as
in-room video and telepresence equipment or whiteboards.

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Enabling high-quality multimedia collaboration

The adoption of collaboration tools among teams in scattered locations depends on how capably the solution can efficiently remove the side effects of distance. Alcatel-Lucent OpenTouch mixes media in a single session, enabling participants to share documents in real time while viewing each other with video. Using IM channels, small groups or the entire community can add comments in real time. With HD video and wideband audio, remote conversations can be as powerful as physical meetings.

Conversation history management

Employees need tools for rapid decision making and flexible management of their conversations. With Alcatel-Lucent OpenTouch, employees can start a multi-party conversation with or without scheduling, add or remove participants, and record and retrieve conversations. When an important business decision is made, employees can store and broadcast the meeting elements and all associated media to a wider audience.

Engaging employees with immersive, social conversations

Simplifications in how users access their professional collaborative space have contributed to redefinition of the workplace. During the next phases of this transformation, conversations will become more mobile, social and simpler. Alcatel-Lucent will innovate in the way visual collaborations will emulate reality and will improve applications' context awareness.

Figure 3 shows an example of an immersive experience in which the speaker is displayed simultaneously with the presentation he/she is giving ("weatherman style").

Figure 3. Immersive conversation experience example

Integration with social platforms

Integration with broadcasting platforms and enterprise-grade community collaboration platforms such as Jive™ will offer new ways to post, share, comment and value content related to business occupations. In the future, employees will be able to more quickly set their presence and availability and reduce the number of actions required to prepare a meeting, invite colleagues, establish the conversation and store relevant content.

A typical use case involves a doctor who starts to see patients with his Apple iPad in hand: from his calendar, the system knows that he is then only available for IM. The doctor enters the examination room, and his status automatically turns to "busy". Back

in the corridor, he starts a video call with another specialist. Because the background of the image is constantly moving and is not necessary, the system removes it. However, the valuable information exchanged during the call is stored and attached to a common theme so that other medical staff can retrieve it.

Immersive video

Simplifying content that is visually shared by removing non-essential backgrounds will improve efficiency and save on bandwidth utilization. Tags with contextual information will be added to raw video images.

Context awareness

Deeper integration with external applications such as calendars will help workers balance their personal and work lives. Automatic roaming and network capability detection will allow applications to adapt media flows to the context. Wired and wireless devices will be localized, and presence information will adapt instantaneously.

Moving toward conversation-based business practices

Some examples of use cases in which communication applications are deployed for dedicated business needs are:

- Communications for retail banking multimedia experiences
- Emergency communications for safe campuses and utilities
- Recording solutions for regulatory purposes
- Welcome and room automation applications for hospitality

In the future, business practices powered by Alcatel-Lucent will run on SIP, benefit multi-vendor Private Branch Exchanges (PBXs), transport more multimedia content, integrate new user profile inputs from IP sensors and databases, and enhance the user experience with smart device apps and more self-service management. Table 1 summarizes these directions.

Table 1. Alcatel-Lucent Enterprise directions for business practices

BUSINESS PRACTICES	ALCATEL-LUCENT ENTERPRISE DIRECTIONS
Customized routing	Extend routing to multivendor PBX infrastructures, enriched with visual collaboration and based on richer contextual information
Emergency services, alarms, group communications	Take into account increased mobility and multimedia use cases for these mission-critical services
Service creation environments	Expand the application ecosystem with: • SIP for multimedia connectivity • REST APIs for session and management control • HTML5 for interactive graphical interfaces

Extending the reach of customized routing with SIP

Many businesses need to distribute and route communications according to specific information, such as telephony busy/free status and customer relationship management (CRM) data. The transformation of Alcatel-Lucent routing applications to SIP will bring openness to multivendor PBXs and will add visual interactions to voice. New routing

criteria will increasingly incorporate self-provisioned information such as calendar status as well as automated CRM and sensor information (location, connected device).

Redefining safety and instant group communications with mobile apps, IM and visual collaboration

Task-group communications often take place in specific circumstances, such as emergency notifications, daily finance calls, or virtual airport gate staff meetings. In certain settings, business communications must always be on, such as in emergency centers, utility and transportation control centers, and the recording of finance communications. Alcatel-Lucent task-group communications will evolve with more customized apps on tablets and smartphones for mobile staff. Notifications and alerts from IP sensors and ruggedized endpoints will trigger group communications. IM, video and content sharing will add value to these interactions. Live and recorded content will be made available for broadcast over multiple devices.

Integrating conversations with REST APIs and SIP

Many vendors and developers are becoming trained to use Representational State Transfer (REST) application programming interfaces (APIs) — a programming interface that is lighter than Web services — and SIP. Alcatel-Lucent will publish high-level REST APIs for easy integration of conversations in business applications.

Unified management interface publication will enable the integration of conversations in hypervisors[7] and self-service portals. Simple conversation control and user-centric routing will be published for integration in enterprise social software. Alcatel-Lucent will use standard SIP to interface with dedicated healthcare, ruggedized or wireless endpoints. Server-to-server SIP connections will provide breakouts to dedicated SIP infrastructure — for example, for recording, messaging and legacy video rooms.

Customizing the conversation experience with appification

Touch screens and multimedia content on smartphones and tablets have led to new standards for Web application design. Alcatel-Lucent smart desk phones incorporate an environment for customized application development. The first applications provide a customized display and integration with room automation systems. Future evolution will provide increased interactions with endpoints' Multi[3] conversation capabilities.

Future directions for extending the conversation experience

Alcatel-Lucent OpenTouch user centricity frees employees from device dependencies so that they can access their business profiles and environments from any interface. Future Alcatel-Lucent OpenTouch developments will enable more flexibility at the choice-of-device level as well as provide greater agility as employees access their business applications.

New devices to optimize enterprise communications

Alcatel-Lucent will offer innovative new desk phones that leverage the benefits of SIP technology and continue to deliver the advantages of office conversations.
Evolutions of campus mobile phones will maximize existing investments in DECT and/ or WLAN technologies. Cordless Advanced Technology – internet and quality (CAT-iq) implementation will improve DECT communications (for example, provide wideband-ready devices with increased energy savings). IP-DECT will reduce deployment costs. The new generation of devices will offer application-based services on WLAN to complement DECT voice-only conversations.

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7 A hypervisor, also called a virtual machine manager, is a program that allows multiple operating systems to share a single hardware host.

Alcatel-Lucent OpenTouch clients on any device
The reach of the Alcatel-Lucent OpenTouch conversation experience will extend to consumer devices, such as Android-based smartphones and tablets, Mac OS, and Windows PCs.

Alcatel-Lucent OpenTouch services on legacy devices
With SIP application federation, enterprises will be able to leverage their existing equipment by delivering Alcatel-Lucent OpenTouch experiences on legacy devices and platforms.

Alcatel-Lucent will help enterprises to remove devices from server dependency and deliver cloud-based private or public business communication services with applications on any device. Tight integration with legacy telephony platforms will enable a converged, enriched conversation experience.

CONCLUSION

The Alcatel-Lucent OpenTouch Suite for MLE is a flexible IP communications offer that addresses business-telephony to mission-critical communications for mid-sized to large enterprises. Enabling an immersive, collaborative conversation experience, the suite features an integrated, virtualized SIP platform and a strong application ecosystem. Employees benefit from seamless conversations and an innovative Multi³ conversation experience from a single interface. Enterprise business practices will increasingly benefit from customized routing, appification, and the easy integration of conversations in a wide range of business applications.

ACRONYMS

API	application programming interface
BYOD	bring your own device
CaaS	communications as a service
CAT-iq	Cordless Advanced Technology – internet and quality
CIO	chief information officer
CRM	customer relationship management
DECT	Digital Enhanced Cordless Telecommunications
HD	high-definition
HTML5	Hypertext Markup Language, revision 5
IM	Instant Messaging
IP	Internet Protocol
IT	information technology
LAN	local area network
MLE	Mid-sized and Large Enterprises
Multi3	multi-party, multimedia, multi-device
OPEX	operating expenditures
PBX	Private Branch Exchange
PC	personal computer
RAP	Remote Access Point
REST	Representational State Transfer
SBC	Session Border Controller
SIP	Session Initiation Protocol
TDM	Time Division Multiplexing
UC	unified communications
UK	United Kingdom
URL	Uniform Resource Locator
VoWiFi	Voice over Wireless Fidelity
WLAN	wireless LAN

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