

Mobility and the Numberless Enterprise®

White Paper
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Much has been made about unified messaging and client devices as the cornerstones of Unified Communications but much can be learned from developments in the data world, where the notion of “data virtualization” has taken hold. Wikipedia defines data virtualization: “In computing...virtualization is the concept of a holistic view of all the resources in the entire network. The holistic view is independent of the physical storage devices and their geographic location.” Cisco CEO John Chambers has said: “Those who capitalize on virtualized resources, such as access to other potential team members ... will become part of virtual teams that lead Cisco and other companies in the future”.

If we consider the people of an enterprise equally important to its data and apply the same logic, you could say that “people virtualization” is the concept of a holistic view of all the people in the enterprise. The holistic view is independent of the person’s devices and their geographic location.

The ability to promptly collaborate with virtualized people is to refer to them by logical context, just as in data virtualization. As the internet became more complex, we do not locate Google by typing 66.102.7.99, we find it through its logical name “Google”. Similarly, as the average enterprise has become more complex through flexible workplaces, travel, global teaming, churn, multiple devices, numbers and addresses, the most logical context is to find people by their name.

Virtualization enhances the ability to manage and change the physical environment without disrupting the performance of the enterprise. From a workforce perspective, this separation of people from physical environment allows flexibility in where people work, who supports a particular type of inquiry, and how companies recover from physical emergencies. Virtualization enhances the team’s ability to communicate, compete, and collaborate regardless of changes and volatility in the physical infrastructure.

In a “numberless enterprise”® people and teams connect with no concern for numbers or physical location. This virtualization of a mobile person’s workplace is achieved through a combination of highly accurate speech recognition, software logic that defines and tracks relationships between individuals and groups, and attentive monitoring and correction through automated services.

A “numberless enterprise”® emphasizes the interpersonal way we reach out to collaborate, we know people by name or why we need to connect, their holistic relationship to us, and the value of verbal connections, whether live or messaged, individual or group. Workers and outside callers alike focus on immediate high value voice communications, not juggling numbers or fumbling through phone addressbooks or menu trees. In a numberless enterprise I find groups waiting for me in a meeting without access numbers, I locate people

and teams by name or search criteria, and I can change location with no impact to connectivity.

Vendors have developed Unified Communications (UC) products built upon email, presence, calendaring, shared workspaces, and IM. A “numberless enterprise”[®] takes the approach that, first and foremost, unifying communications is about easing connections between people, that verbal communication is of high value, and supporting services like email, conferencing, and IM are invoked as needed to make the human connection successful. Ascribing a high value to verbal, human contact between customers, peers, teams, and managers builds intimate, cohesive organizations while providing the basis of a virtualized workforce. It is the natural way customers prefer to interact, how managers best articulate their vision and needs, and how mobile workers become cohesive teams.

Yet, speech technology is noticeably absent from most UC strategy statements and, in large part, that is due to the difficulties of successfully establishing an enterprise’s holistic view through speech. One difficulty in creating an accurate people view of the enterprise is managing the constant changes to a person’s community of interest. A speech-based virtualization engine like Mobiso needs to hide the changes from the person, learn about the person’s community over time and through IT integrations, and allow the person to dynamically create shortcuts. A busy mobile worker needs to find help from an individual, department, or team without lost time due to out-of-date directories or searching through associations in emails and lists. The ability to easily connect to pre-arranged and “on-the-fly” teams, across communities, improves productivity and builds teamwork. Lyrix calls this the PeopleFind Intelligent Addressbook.

Why is speech recognition important to people virtualization? After all, you could display an intelligent Addressbook on a Blackberry and hide the underlying numbers of the people. However, an unnatural way for people to connect in the field is “thumbling” through increasingly large communities, managing changes, and connecting safely. An accurate speech interface will make connections in less time and more safely. Being able to say “Conference Goldman Sachs Team” is far more expedient than thumbling through a search in a directory for those people associated with the Goldman account.

Lyrix has created Mobiso™ as a unique service offering that creates a numberless enterprise, based upon the self-learning intelligent addressbook which integrates to the IT infrastructure to deliver accuracy, flexibility, and context. The Mobiso communication strategy focuses first on the successful connecting of people and then provides UC features only as they’re needed. Therefore, the core of the service is the grammarization of an organization’s people connections – individuals, places, teams, products. Mobiso’s Logical Choice layer integrates the various directories, ranks them by individual for activity levels, and watches schedules and messaging activity to make inferences about important contacts. Over time, Mobiso quickly learns from its interactions with the user and improves upon its performance. Lyrix won a US patent for this logical layer.

Mobiso focuses on activities where being numberless generates benefits. For example, saying “email me the Goldman report” has little to do with people or numbers. People are



comfortable with examining documents, emails, and calendars from their PDA or laptop displays. In a car, a person shouldn't be reading emails, but it's a good time to reach out and speak to someone.

Another example of where physical considerations impede connections lies in Fixed Mobile Convergence (FMC). Enterprises are evaluating capital expenditures to provide FMC support for when mobile workers enter the premises and their phones are now recognized as extensions and connect over local networks. A speech-based virtualization engine like Mobiso improves the use of FMC investments. When outside callers know someone as John Jacobs, they continue to call Mobiso and speak his name. When John is in his office and has toggled FindMe to his office phone, he will not expend minutes for those calls. Outbound calls from his cell phone still expend minutes and conversations do not automatically transfer from wireless to WiFi. However, these situations are limited compared to the flexibility brought about by flexible location through virtualization.

Lyrix has been deploying speech technology across the largest enterprises for over ten years. These enterprises had a vision not of firing operators but for how the virtualization of their workforces through speech would lead to more effective companies. The most important benefits to pursuing virtualization were the ability to recover from physical disasters, teams collaborating ad-hoc despite geography, travelers finding resources without directories, and customers reaching assistance or information without knowledge of numbers, time, or place. One firm provides thousands of workpods that are shared by employees; they move between pods, cars, and homes with no management of numbers necessary.

Virtualization of staff through a speech assistant allows companies to direct their incoming customers and prospects through an improved, multi-featured gateway to increasingly mobile staff. A customer may say "customer service" or speak "John Jacobs" and will have enhanced options like leaving messages, getting an alternate contact, or having a team call – a significant improvement over a direct call to John's cell phone. Further, by directing callers through a virtualized portal, the company retains control and ownership of important assets- those customers and prospects. When John Jacobs leaves the company, those important customer contacts don't only know John's cell phone number and "John Jacobs" can be replaced with another employee more readily.

A self-learning virtualization engine for people based on speech and verbal communications creates the future intelligent addressbook for the numberless enterprise – without thumbling.



About Mobiso and PeopleFind



Mobiso is a service for enterprises built upon Lyrix's PeopleFind technology. PeopleFind is a combination of speech engines, proprietary software logic, and proprietary Day2 linguistic services. PeopleFind software is licensed to OEM partners as a foundation for their speech products. Mobiso combines PeopleFind with partner technologies, such as Alcatel's MyTeamwork, Funambol, and Gotvoice to provide a cloud-based speech assistant helping mobile workforces better connect and collaborate in the "numberless enterprise"®.