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### **Commercial VoIP vs. Residential VoIP: Raising the Bar on IP Voice Services**

by Rick Mallon

IP-based voice services are seeing increasing success in residential markets and in the Web 2.0 world. Residential users love the lower prices, and individual business users like to take advantage of ubiguitous services like Skype that offer features beyond the typical voice offering, but neither of these market segments drives the sort of stringent requirements that a true commercial VoIP offering will demand. Whether serving large, national enterprises or small- to medium-sized regional businesses, carriers must address specific and challenging requirements that don't exist in the consumer or Web 2.0 world. These range from more complex order capture processes; administrative self-help functions; complex telephony feature provisioning; and mass number ports to support for new CPE devices and SIP technology. Offerings that have succeeded in the residential market are not likely to translate directly to business markets and must be bolstered with the appropriate equipment and automated service management.

#### A Sensitive Customer Experience

Business customers typically cannot tolerate delays, errors, or failures when it comes to their voice services. Voice lines are a primary path to revenue and customer contacts. Businesses are extremely sensitive regarding anything that might jeopardize revenue, so building their confidence with a seamless transition to VoIP and a flawless administrative and end-user experience is necessary to win and also retain these high value customers.

Reliability and quality are always going to be concerns for a business that is looking to migrate to VoIP. Lower costs will attract them, but any perceived lack of quality can easily scare them away. Cutting expenses is not worth it if it means sales and customer interactions can suffer. Though typically reliability and quality issues around VoIP relate to quality of service and back up power, automated operational aspects are just as important in building the customer's confidence once they are engaged.

The first interaction a business is going to have with its VoIP provider will involve the order capture process. This process is not typically very robust in the residential world because the orders only involve one or two lines. Carriers tend to get by with Excel spreadsheets and simple templates as a result. Business orders, however,

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almost always involve multiple lines – anywhere from five to more than 100, for example. Consider the sheer number of keystrokes involved in capturing an order for dozens of lines, most of which will have multiple features extending beyond voice mail and call forwarding. A manual process will not only be slow and cumbersome, but extremely error prone. If orders are not captured and processed correctly, it will lead to errors that delay the migration process, which can result in service disruptions. The fastest way to lose a newly won business customer's confidence is to make a mess of the initial ordering process. This problem can be minimized with an automated solution that is designed to guide an agent through complex order capture, eliminates re-keying of common data, and performs basic integrity checks on every order. Orders must be subsequently tracked, managed, and reported upon with relevant operations support systems to ensure accurate provisioning, robust error handling, and instantiation of billing activities.

Part of this complex ordering process will involve mass number ports. Businesses need to keep their phone numbers consistent, so with dozens of lines will come dozens of number ports that must be executed flawlessly. Number porting is not simple. Stories abound in the industry about wrong numbers being ported, which in turn leave customers without service and no way to even contact their provider to fix the problem. Erroneous number ports will result in service disruptions at worst and a delayed and inelegant customer interaction at best. If this aspect of service fulfillment isn't flawless, it will spoil the customer relationship from the start. Number porting processes can be automated to provide safety nets like integrity checks, to handle the kinds of asynchronous changes businesses tend to make to their orders in midstream and to free staff from managing every individual NPAC transaction.



Another factor in the set-up process is the directory listing. Many residential VoIP offerings do not support directory listings, and they have no reason to support yellow pages listings. The yellow pages still stand as a primary advertising vehicle, especially for regional and retail oriented businesses. To play in the business arena, a carrier must be able to maintain consistency in the customers' listings. Directories are only printed once or twice per year, meaning that an error in a listing or yellow page ad has a long lasting and extremely negative impact. Automating the accurate

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transfer of information to the directory provider is another critical requirement for any automated solution.

#### Getting Technical with SIP and New CPE

Moving beyond the order capture and related operations processes, new technology-related concerns come to the fore for business VoIP offerings. For example, the hunt group is a feature that doesn't exist in the residential world, but is table stakes in the business arena. This feature allows a company to establish a ringing order so that, for example, if a receptionist is away from the front desk, important inbound calls will not be missed when other employees can just as easily take the call. Many businesses like to reconfigure their hunt groups regularly for various reasons, such as a certain employee going on vacation or leaving the company. If a carrier plans to support hunt group configuration with manual processes, it will result in many expensive calls to the contact center and slow response times that make for an inelegant customer experience. This in turn drives unnecessary costs and churn, both of which obviously are counter to the revenue goals that drive new commercial VoIP offerings in the first place. Therefore, the relevant administrative tools, driven through easy to use interfaces, must be available for hunt group configuration.

Session initiation protocol (SIP) is also important to business customers. SIP adds features like subscriber mobility, presence and find-me-follow-me to otherwise basic VoIP lines. These features, while complex, are already becoming table stakes because of free services like Skype that have led the way in their deployment. Further, SIP handsets are complex, multi-button devices that require configuration before being shipped, and which business administrators should be able to reconfigure themselves. A service management solution should provide for mass configuration of SIP devices based on pre-defined profiles. The solution should also provide, however, for online capabilities where an administrative end-user can manage SIP features and reconfigure devices in real time.

Beyond SIP handsets, other new customer premises devices are necessary to enable business-grade VoIP. The typical residential analog telephone adapter that is used for VoIP service only provides two ports. Some operators have resorted to taping or gluing multiple ATAs together to provide multi-line services. This is a sloppy approach that introduces multiple points of failure, uses unnecessary power, and doesn't provide the kind of device monitoring and alarming capability a real business-grade service requires. Business VoIP providers need to support multiple new types of serving devices that are appropriate to the various sizes and types of business customers they choose to target. These devices need to be configured in an automated way so that it's not necessary to use well paid engineers to do what amounts to technical-clerical work with every implementation.

Without process-driven solutions that can help to automate most of these functions, ensure accuracy throughout the customer transition, and drive flawless service continuity thereafter, commercial VoIP offerings will struggle to remain competitive and to offer business-grade service. A service management OSS solution that is designed to support commercial VoIP offerings, and which can scale to support greater volume as well as new services and features, can play a necessary role in providing a foundation for long term growth in competitive but lucrative business

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markets.

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