

## **Open Systems – Getting Beyond the Hype**

Mpathix Inc.

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## Introduction

*“Next Generation.” “Open architecture.” “Open system.”* These are the buzzwords of today's IT and telecom industries. There's no denying that an open system approach is what vendors are using to create platforms that are expandable in both capacity and features. There's also no denying that because of this approach, flexibility in the use of hardware can be achieved, eliminating the past fears of lock-in, high costs and obsolescence. But among the voices extolling the virtues of this approach to system design, are there any with words of caution?

As a service provider, you have stringent standards built from years of experience offering reliable, feature-rich services to end-users. The last few years in telecom have emphasized the need to be competitive and fiscally prudent. Are open system platforms the answer to all this?

After years of seeing networks evolve, you know there is no such thing as a “free lunch.” But one thing is for sure: platforms based on the open system approach will make future feature expansion easier and therefore, the step from legacy to open systems needs to be taken. Still, there are myths to dispel and bigger pictures to see, if you want a successful crossover.

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*The Open Group Architecture Framework ([www.opengroup.org/architecture](http://www.opengroup.org/architecture)) defines an “open system” as “A system that implements sufficient open standards for interfaces, services, and supporting formats to enable properly engineered components to be utilized across a wide range of systems with minimal changes, to interoperate with other components on local and remote systems, and to interact with users in a style that facilitates portability.”*

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## Common Myths About Open Systems

### **“An open system approach lowers costs.”**

This is true. An open system approach lowers a vendor's costs for multiple reasons, including lowered development costs and the use of commercial off-the-shelf hardware. But does the vendor pass these savings on to you? The savings are drastic, and you should see a large difference in the total cost of ownership between an open system platform and older legacy systems. You should see these from the first price quote and not after multiple negotiations when the vendor finally decides to cut into their inflated margins. It's important to remember that the vendor's cost to develop and support an open system platform is lower because the cost structure of doing business has been altered. This is the reason why the savings should be passed onto the carrier. Beware of vendors that claim to use an “open system” approach, but do not have prices greatly reduced from that of legacy systems.

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*As an example of the ultimate savings and flexibility that can be passed onto the operator, Mpathix™ allows the service provider to purchase servers and storage themselves. This proves that Mpathix software runs on commercial off-the-shelf hardware. Since Mpathix uses SUN servers, carriers are encouraged to purchase the required equipment from their SUN reseller of choice. Because of the widespread use of SUN equipment and operating systems in the telecom industry, many operators have special discounts with SUN which can be applied to the purchase. In cases where the service provider also has a support and maintenance contract with SUN, the servers can be included within the existing contract; this decreases administration costs of maintaining multiple support and maintenance terms, and ensures SUN support on the equipment. An additional benefit of using industry standard hardware is that the carrier's technical staff are familiar with the technology and interfaces. Additional cost-savings can be obtained through reduced training requirements and ease in finding qualified support staff.*

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### **“Open system platforms can use commercial off-the-shelf hardware.”**

This is true. However, as with any change in technology, many old problems are eliminated, but new issues arise. A good technology switch should decrease the issues to be dealt with in both number and business or network impact. The newer technology should offer possibilities that were not previously available. Of course, with these new possibilities come new considerations. Platforms that use the open system approach do not have the issues traditionally associated with legacy systems, such as:

- expensive, obsolete hardware
- inflexible interfaces to other network systems
- inability to accommodate next-generation features
- high cost of ownership

However, with the ability to use commercial off-the-shelf hardware comes the following considerations:

**Support.** Legacy vendors tend to use proprietary components that give them the ability to internally control hardware evolution and their effects on other aspects of the platform. However, this control forces the legacy vendor to perform all development in house, which increases the total cost of the platform, and slows down product evolution. Open system platforms offer flexibility in hardware, but typically meld components from multiple suppliers. This is unavoidable in today's IT and telecom industries. Fortunately, the ability to use best-of-breed suppliers gives open system platforms performance and operational advantages.

However, in the worst case, troubleshooting becomes a game of finger pointing between suppliers, with the operator stuck in the middle. Do not get caught in this position. Choose an open system vendor that is accountable for their platform as a complete product and is willing to be your Single Point of Contact (SPOC) for all issues regarding the solution. The vendor should be responsive to issues raised by the service provider, and work with the appropriate technical experts, regardless of whether they are internal or not. Dealing with the multiple best-of-breed suppliers is the responsibility of the vendor, not the carrier.

**Upgrades.** Because open system platforms may use components from other suppliers, make sure that the vendor has the right processes in place to evaluate and incorporate relevant updates to the components into the platform itself. An update from a vendor's supplier should not be introduced into the platform until it has been deployed in production by other systems. This ensures that the update is stable in commercial use.

**Evolution.** A serious vendor will proactively work with key suppliers to ensure that the entire platform is optimized. Evolution of the platform's "parts" are seamlessly integrated into the entire platform's evolution. Choose a vendor that incorporates both the improvements made by their suppliers as well as their own into the platform.

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*Mpathix Voicemail and the Mpathix MX platform use SUN Netra servers. This partnership extends beyond the transactional supplier-client relationship. Mpathix works with SUN to determine the optimal platform architecture and configuration to ensure product reliability. When operators call the Mpathix toll free number for assistance, it is Mpathix technical support that responds and works with the service provider to understand the situation and work towards a timely resolution. Mpathix determines if other suppliers need to be contacted, and works through the issue backed by experts. The carrier's interest is the highest priority – that is, a speedy resolution.*

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**Reliability.** Operators provide a high level of network reliability. This is necessitated through tough competition and in many cases, by law. This is the reason why service providers must be particular about the network equipment selected. This is always true. Although open system platforms are not tied to any particular hardware, choose a vendor that uses “tried and true” equipment. Is the system NEBS compliant? Is an industry-accepted standard in operating system and hardware used? You do not want to risk lowering the overall reliability of your network by lowering the standard for reliability in any one element.

### **“Open system platforms scale easily.”**

The modularity in system design inherent in open system platforms enables ease in scalability. However, as a carrier choosing a new voice messaging platform, you should ask your vendors to quantify the statement. Most systems can be networked, but how much traffic (or mailboxes) can be supported by a single node? This is important...you could serve a large network with multiple networked nodes, but many vendors charge per feature fees that kick in on a per node basis. So, if you have multiple nodes, you will pay more. Choose a vendor with a platform that has a large per node capacity, and still has the ability to network across multiple nodes. This will give you the most flexibility in network design. You can choose a voice messaging network design that is decentralized, centralized, or anywhere in between.

With many open system platforms, the number of nodes that can be networked may be endless, but the real question is what is the largest number of mailboxes served in any one live network? Find vendors that are willing to tell you both their largest per node loading, as well as their largest network loading. You want to make sure that the vendor has commercial examples of their loading in order to be comfortable with the platform's true reliability and scalability – not just their theoretical predictions. Also, you'll want to be sure that the vendor has experience supporting a multi-million subscriber network.

### **“Open system platforms support all the latest and greatest features.”**

One of the major benefits of an open system approach is the ability to interface and interoperate with a wide range of software or hardware. This ability enables open system vendors to leverage the competencies of many suppliers – each an expert in their specific contribution. If “the whole is greater than the sum of its parts,” you can begin to understand the greatness that can be achieved by the platform as a whole, when each of its parts are best-of-breed. However, what are these “parts”?

Since you aren't playing with Lego, don't choose a vendor that treats their development as such. Along with the promise of flexibility and modularity comes the threat of undisciplined software development, which ultimately results in unreliable, and hard to maintain software. Ask each vendor about the approach used in software development. Do they have a philosophy? What are they really trying to achieve? What processes do they have to keep development focused yet flexible enough to incorporate the needs of numerous clients?

Beware of vendors that want to be everything to everyone, and claim that because they use an open system approach, they can. You want a vendor that is willing to:

- Establish boundaries around the component required, and doesn't provide any unnecessary functionality by using software components that the system doesn't really need. Undisciplined development leads to "bloatware" that the vendor will have difficulties supporting.
- Ensure that software used is certified or verified to perform according to the industry standard where the software will be applied.

### **"Migration of end-users will be seamless"**

As an operator, you know that large scale migrations of end-users of any sort is a complicated process not only because it involves changes in the network, but in many cases, changes to back-end systems and internal processes. This is something that service providers are familiar with, and must go through, in order to keep networks current. A well prepared migration will most likely be successful and smooth. Choose a vendor that is willing to discuss past migrations with you. The vendor must be able to provide you with references, allowing you to understand their experience level (both in number of migrations performed and the size of the migrations). The vendor must be able to produce concrete plans and answer all of your questions regarding subscriber impact, network impact and back-end system impact (e.g. billing and provisioning). As a carrier, you should know what your options are.

As with all business decisions, you will need to balance time, resources and money. Using different combinations of these, various possibilities for migration implementation can be devised that meet or exceed your standards for network implementations. Ensure that your vendor is open about the possibilities for migration, and that you choose the one that offers the best mix of time, resources, money and client impact. In the end, you want a migration that minimizes inconvenience to your subscribers, and does not drive mass complaints into your client care center.

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*Mpathix has extensive experience migrating subscribers from legacy systems to the Mpathix MX platform. The following are things to consider while planning for migrations. An important measure of success is the volume (or lack) of calls to the client care center after the migration. Mpathix understands this and has worked with all operators migrating to the MX platform to make the event...uneventful.*

- ***Don't hide it.*** You've built up a level of trust with your network users. Even the most well-planned implementation is not zero risk. In most cases, well thought out implementations are smooth, but in cases where it is not, informed users will be prepared, and you will not have to deal with an angry mob. People hate unplanned, uncommunicated disruptions to service.
  - ***Communicate with your users.*** With proper communication, people will think of you as a responsible, honest, and considerate service provider who wishes to offer better service by keeping the network current. Inform your clients of major network changes well in advance by sending inserts or messages on invoices, posting a bulletin on your website (and keeping it up to date!), and educating client care so that client inquiries are properly handled. Win the respect of your clients by treating them as intelligent individuals.
  - ***Offer a carrot.*** Go one step further. Proper communication with your clients wins their respect, but giving them something new with clear benefits (for free) will win their loyalty. When planning a migration from a legacy system to a new voice messaging platform, revisit your voicemail packages and offer a little extra in each so that your users will immediately feel the benefit of the change.
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### Conclusion

So, should we all rush out to replace our legacy systems with open system platforms? The answer is “Yes” with a “But”. Don't let the hype keep you from evaluating new technology decisions with the rigor needed to maintain the network reliability your users depend on. Most serious voice messaging vendors today will offer open system platforms; those that don't risk selling platforms whose technology is, or will be, obsolete. But despite the benefits of open system platforms, nothing can replace the care and thoroughness needed to choose a vendor that has considered your implementation and operational needs.

You want to provide reliable, feature-rich and future-proof services to your subscribers while remaining fiscally prudent. Be sure to ask each vendor to qualify statements about lower cost of ownership, reliability, scalability and seamless migrations. The technological advantages of using an open system platform are numerous, but make sure that your vendor applies these advantages to the development of a complete solution that fits your needs. Finally, check that your vendor has the experience necessary to provide and support mission-critical services in a telecommunications network such as yours.

If you keep these things in mind during the selection process, you will find an open system platform that meets your current and future needs, as well as a vendor that is serious about product evolution, reliability and service.

### About Mpathix

Mpathix is a pioneer in providing open system, carrier-grade messaging solutions across MF, SS7, and VoIP networks, including voicemail, faxmail, auto attendant and unified messaging. Based on open architecture, the Mpathix MX platform consistently meets the stringent requirements of telecom and enables service providers to reduce costs while driving new revenue. Unlike competitive legacy systems, the platform is a “future-proof” investment, easily integrating with the latest technologies to evolve with customer needs over time. Mpathix didn't invent the future. Just the future of voicemail.

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