

# IP LaunchPad's Enhanced Managed Delivery: Complementing Unified Messaging

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Revision 9.1, Draft 4

## Executive Summary

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With the UM (Unified Messaging) market to hit \$3 billion by 2002<sup>1</sup>, service providers are looking to UM solutions to complete their messaging portfolio. However, while traditional UM solutions concentrate on unifying inbound messaging (email, fax, and voice), they do not have any enhanced outbound messaging capabilities.

Open Port's IP LaunchPad platform can complement your UM solution thanks to its enhanced outbound delivery services capabilities. With IP LaunchPad, you can complement your traditional UM system by offering enhanced managed delivery services that give your subscribers a truly unified messaging solution – meaning both inbound and outbound messaging services. With a truly unified messaging solution, you can better differentiate yourself from your competitors to attract subscribers and grow revenue.

IP LaunchPad's enhanced outbound delivery services include Voicemail Suite and Fax Suite, which enable subscribers to send voicemail and faxes from the device they choose. Voicemail Suite is a value-added service that integrates disparate voicemail systems (wireless, landline, and IP) in order to offer your subscribers rich outbound services such as message broadcasting, guaranteed delivery of messages, and never busy messaging. Fax Suite, another value-added fax-over IP service, makes it possible for your subscribers to use any device (email, voicemail, a Web browser, or fax machine) to receive and send faxes.

Deploying IP LaunchPad with Voicemail Suite and Fax Suite services offer you:

- Increased revenue
- More network traffic
- A solution that leverages your existing UM system
- A means to attract "road warrior and SOHO (Small Office/Home Office) subscribers
- A means to minimize subscriber churn and reduce your costs

This white paper serves as a set of guidelines for those of you who want to know how IP LaunchPad's enhanced delivery services can complement your traditional UM system and help you grow revenue while preparing you for the UM demands of the future.

## **Unified Messaging Market Overview**

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Enter office. Check messages.

For most workers, it has become increasingly common for them to spend large portions of their day checking their voicemail, email accounts, and fax machines. According to Pitney-Bowes, the average business person receives 177 messages per day<sup>1</sup>.

The advent of "unified messaging" services, however, has changed all of that. Service providers and subscribers asked for integrated messaging systems, and vendors such as Cisco, Lucent, and Nortel have responded with "unified messaging" solutions that primarily focus on unifying inbound messaging, allowing subscribers to receive all emails, voicemails, and faxes in one mailbox on their PCs. In essence, UM offer data-barraged subscribers the opportunity to manage their inbound data streams.

As a result, greater numbers of subscribers are turning to unified, IP messaging platforms for the convenience of inbound data convergence. Rather than monitoring multiple, separate mailboxes, subscribers save time and increase productivity by receiving all incoming data in a "unified mailbox." Ovum Research predicts that "unified messaging will replace dial-tone as the interface to the network,"<sup>2</sup> and since then subscribers have continued to flood IP networks in search of voice and data convergence. In fact, IDC (International Data Corporation) predicts that by 2002 the market to unify email/voicemail/fax will hit \$3 billion.

### **Does Unified Messaging Measure Up?**

Current UM systems offer subscribers the freedom to access their messages anytime and anywhere.

However, in terms of outbound messaging, these UM systems presently limit subscribers' delivery options to text-only messages. Traditional UM systems restrict subscribers to sending responses in the original message's format. For example, if a subscriber receives email messages in her UM mailbox, she must respond by text-based email and her response will be delivered to the recipient's email message device. Due to UM's limited outbound capabilities, she would not be able to respond to the email message with a voicemail message – even if she knows the originator was traveling and thus will only be checking his voicemail.

### **Open Port's IP LaunchPad: Redefining Unified Messaging**

Open Port's IP LaunchPad expands the industry's definition of **unified messaging**. As the above description of traditional UM implies, what our industry commonly calls "unified messaging" is more accurately described as a **unified inbound mailbox**. That is, the subscriber typically receives all of her voicemail, faxes, and email in one mailbox. Open Port, however, views unified messaging as a subscriber's ability to control how and where he receives *and* delivers messages (also known as **unified communications** in the industry).

With IP LaunchPad's unique outbound messaging capabilities working together with a UM solution on your network, your subscribers can not only take advantage of the convenience of a unified mailbox – they can respond to each message in the format most convenient to them. For example, if they receive an email in their unified mailbox, they can respond to it with a voicemail message and have it delivered to the original sender's email program; or if they receive a fax in their unified mailbox, they can respond to it with an email message (with the original fax attached) and send it to a fax machine.

IP LaunchPad provides you with an opportunity to optimize the delivery technology of your traditional UM platforms, and provide those enhanced managed delivery services that will truly unify your messaging system. Open Port's award-winning IP LaunchPad

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<sup>1</sup> Pitney-Bowes, 1997.

<sup>2</sup> Ovum Research, 1998.

platform complements traditional UM systems with enhanced managed delivery services giving you and your subscribers enhanced outbound delivery options.

This white paper should be used as a guideline to learn how IP LaunchPad's enhanced managed delivery system could complement the inbound capabilities of your traditional, access-oriented UM solutions.

## **Overview of IP LaunchPad's Enhanced Managed Delivery**

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Open Port's IP LaunchPad is a carrier-class IP messaging services platform that works with your existing UM technologies to offer you enhanced managed delivery of subscribers' messages. IP LaunchPad makes it easy to launch and manage subscription- and transaction-based services, along with different tiers of services, all of which complement your traditional UM solution. For example, traditional UM systems, with their focus on unifying inbound messages, usually only have service-based billing that correlates with the size of the subscriber's inbound mailbox (e.g., a subscriber can pay more to increase his mailbox from 3 MB to 25 MB). However, because UM systems don't offer managed delivery capabilities, service providers cannot bill for outbound transactions. Contrast the billing capabilities of traditional UM systems with those of PSTN (Public Switched Telephone Network) carriers, whose SLAs (Service Level Agreements) permit them to bill for every outbound transaction (i.e. each long-distance call) that a subscriber makes.

IP LaunchPad is unique because its managed delivery capabilities allow you to increase your revenue by billing for each outbound transaction *and* every tier of service. In other words, IP LaunchPad complements your traditional UM system by bringing enhanced delivery services and PSTN-like outbound SLAs to IP.

### **How Does IP LaunchPad Integrate with UM Solutions?**

A "connector" is software code developed by Open Port or a third-party developer that enables different communications devices and protocols to work with the IP LaunchPad platform.

IP LaunchPad features hardware abstraction which empowers you to quickly roll out new outbound messaging services without major impact to your existing network infrastructure. Our IP LaunchPad platform, for example, easily links with your current UM solution so that you can begin to offer enhanced delivery of messages as soon as possible.

IP LaunchPad integrates with traditional UM solutions through "*soft integration*." A "*soft integration*" occurs when the UM solution sends each message over the IMAP4 (Internet Messaging Application Protocol) using an IMAP4 connector to IP LaunchPad. IMAP4 is a standard protocol standard used for sending fax images over data networks using email protocols. The IMAP4 connector allows IP LaunchPad to communicate directly with an IMAP4 message store using the IMAP4 protocol. IP LaunchPad's IMAP4 connector now provides numerous benefits to the service provider by connecting directly with the IMAP4 message store:

- After the message is sent, IP LaunchPad receives an immediate reply noting whether the message was accepted or rejected, along with supporting information to determine the next course of action.
- If the delivery failed, IP LaunchPad can then invoke an IMAP4-related policy that could send a delivery failure notification to the subscriber noting the reason for failure (i.e. delivery exceeds mailbox sizing restrictions).
- Or, if the delivery fails, IP LaunchPad could also use a different elongated retry schedule to attempt a redelivery.

As a direct result of Open Port's engagement with various high-tech vendors, including Cisco and the Sun-Netscape iPlanet Alliance, IP LaunchPad essentially acts as a managed message pass-through for UM solutions based on the IMAP4 messaging protocol.

Not only does IP LaunchPad's "*soft integration*" improve the way IP LaunchPad performs with your traditional UM system, but the IMAP4 connector capabilities also allow you to bill your subscribers for email-based features such as delivery notification and attempted redelivery.

## **Benefits of IP LaunchPad's Managed Delivery Services: Policies, Broadcasting, Billing, and Send and Receive Notifications**

The enhanced outbound delivery capabilities of IP LaunchPad are supported by the contracts, broadcasting technologies, tracking capabilities, billing, and notification procedures inherent in IP LaunchPad, the combination of which offers you multiple ways to grow revenue. In comparison, the contract and billing structures of traditional UM systems, which encompass only inbound messaging capabilities, limit your revenue to SLAs based upon mailbox size.

### **Contract Management Helps You Control Network Traffic**

A *contract* is a set of policies and permissions that delineates which services you will offer to subscribers and what subscribers will pay for those services. *Policy and permissions* detail which services (i.e., fax retry when the recipient's line is busy) are available to a subscriber and which services are restricted.

IP LaunchPad's built-in contract management capabilities enable you to optimize network resources by preparing customized service contracts for your subscribers. For example, you can offer subscribers multiple tiers of enhanced outbound delivery service (such as pre-paid, basic, and premium). Subscribers will then pay accordingly for each level of service, and certain transactions may or may not be included in each level of service. IP LaunchPad's contract capabilities are unique in that they allow you to create both a *subscriber- and transaction-based delivery system*.

These contract capabilities benefit both you and your subscribers. By offering different tiers of service, you can better control your network traffic while at the same time meeting the needs of your subscribers. Consider, for example, a subscriber (such as a banker), who is a light user with high priority messages; he can pay for a tier of service that gives his messages high priority during peak times. Conversely, subscribers (such as list managers) who send out broadcasts can purchase a lower service level, and thus, have their broadcasts sent at cheaper, off-peak times. IP LaunchPad's contract management capabilities help your platform make the most efficient use of its resources while still meeting subscribers' minimum expectations.

The handling rules for IP LaunchPad's contract management capabilities are divided into five distinct steps that relate to the delivery of messages on behalf of sender-subscribers:

1. You create the various contracts that you'll offer subscribers.
2. You assign contracts to subscribers.
3. As noted above, each subscriber's contract contains *policies and permissions*. That is, IP LaunchPad must first determine if the action requested is allowed for the subscriber in question. These are basic switches that tell the system what transactions the subscriber is allowed to do or not allowed to do, and/or what limits are to be imposed – by the system – on those transactions.
4. The next step is to create the message itself. In most cases, this may be a simple duplication of what was created, but there are many exceptions. In fax messaging, there is a possibility that (a) IP LaunchPad will be asked to create a cover page for the fax, and/or (b) IP LaunchPad will be asked to convert an application file (e.g., a text file or a Microsoft Word document) into fax format, TIFF (Tagged Image File Format). There are permissions and restrictions on how such a message may be created.
5. The final step is to assign a priority to the job so that it can be judged against other jobs competing for the same resources. IP LaunchPad's delivery policies work in conjunction with its broadcasting capabilities to provide subscribers with enhanced managed delivery. IP LaunchPad's delivery policy helps you grow revenue by:
  - Allowing you to create tiers of delivery service for your subscribers and to earn revenue based on those differing levels of delivery service. For example, *"pre-paid" delivery* may include broadcasting from one subscriber to another; *"basic" delivery* may allow broadcasting to subscribers and non-subscribers plus voicemail forwarding capabilities; and *"premium" delivery* might

encompass all of the above plus value-added services such as voice mailbox integration and receive notifications.

- Allowing you to develop a billing scale that correlates with each tier of service offered to subscribers. Subscribers of different tiers pay accordingly, and your revenue grows along with the services offered.
- Increasing the likelihood that you can up-sell higher tiers of service to subscribers. IP LaunchPad's StarDomain, for example, is a low-tier service that lets you authenticate an entire enterprise for email-to-fax. While this is a nice introduction to low-tier IP messaging services, those same subscribers may soon want to upgrade to higher-tier services, such as Web faxing, fax-to-email, etc.

## Message Broadcasting Increases Traffic

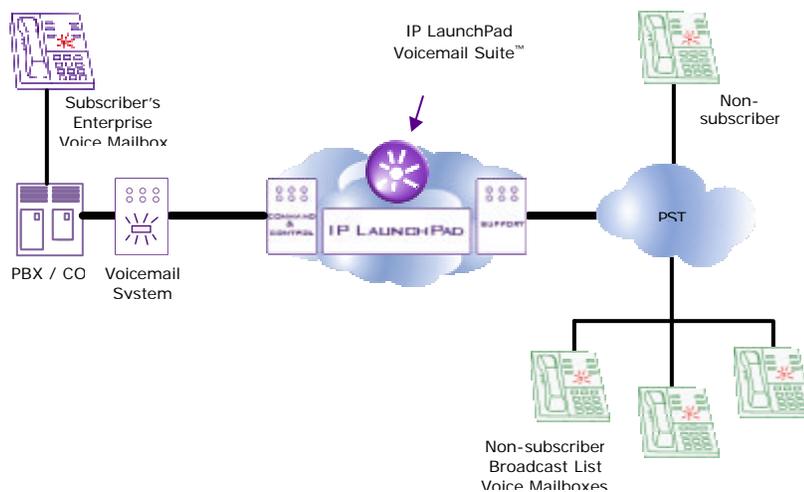
IP LaunchPad simplifies message broadcasting for your subscribers while increasing messaging traffic on your network. With traditional UM systems, broadcasting capabilities are limited; if a subscriber has broadcasting capabilities from her mailbox, she can only broadcast to other subscribers, and her system probably doesn't have mixed-mode (i.e., email-to-voicemail or email-to-fax) broadcasting abilities.

For example, a common problem with voice and fax messaging is that a person often needs to send a voice message or fax to many people at once. Calling everyone up and talking to them live or leaving several messages is too time-consuming. And unfortunately, since all voicemail systems are incompatible, it's not possible for that person to leave a broadcast message for non-subscribers through his/her broadcast system.

Sending multiple faxes has its own set up difficulties: the subscribers traditional UM system may not allow her to send a message from her mailbox as a fax, and who has time to punch thirty numbers into the fax machine and to deal with those faxes that inevitably don't connect, especially to international destinations? Another option is enlisting a fax bureau, but bureaus are typically three to six times more expensive than PSTN charges.

Fortunately, the mixed-mode broadcasting services inherent in the IP LaunchPad platform solve those problems and offer your subscribers the convenience of enhanced managed delivery. Here we use IP LaunchPad's Voicemail Suite as a means of illustrating IP LaunchPad's broadcasting capabilities.

Voicemail Suite's voicemail messaging broadcasting service enables your subscribers to create a voicemail from within their voicemail system and to broadcast it both to subscribers and non-subscribers.



- Figure 1: The illustration above shows how subscribers can broadcast a voicemail message from their enterprise voice mailbox to subscribers and non-subscribers.

As the steps below detail, subscribers can use their voicemail system's familiar IVR (Interactive Voice Response) interface to record and address a message to a specific broadcast list identified by a numeric ID:

1. Each recipient is identified with a subscriber ID, a PSTN number, and/or an email address.
2. A collection of many broadcast lists is managed by the broadcast list management capabilities of IP LaunchPad, such as IP LaunchPad Web or IP LaunchPad's Broadcast List Manager application.
3. Voicemail Suite then forwards your subscriber's single broadcast message to IP LaunchPad, which delivers the voicemail message to all recipients listed in the broadcast list.

As part of IP LaunchPad's managed delivery services, the voicemail can potentially be delivered to a voicemail account, a "live" phone as a pre-recorded message, or to an email address as an audio file (WAV, or Windows Audio Video) attachment.

### **Delivery Tracking**

IP LaunchPad also ensures that your subscriber knows the status of his message in the delivery process. IP LaunchPad's built-in LCR (Least Cost Routing) and queue management technologies are used in conjunction with contract enforcement mechanisms to prioritize, schedule, retry, and deliver messages to all intended recipients. Subscribers can then track the progress of their messages and receive a notification when the broadcast delivery is complete.

### **Service-Oriented Billing Capabilities Grow Your Revenue**

IP LaunchPad's billing solution helps you grow revenue while traditional UM solutions can only offer flat-rate billing. This is because traditional UM solutions are subscriber-based rather than subscriber- *and* transaction-based. In other words, with traditional UM solutions, your means of growing revenue are limited. But with IP LaunchPad, you have many more options for increasing revenue.

IP LaunchPad's billing solution gives you service-oriented billing capabilities that are also connected to IP LaunchPad's contract management and outbound delivery capabilities. For instance, as mentioned earlier in "Contract Management," you can offer your subscribers multiple levels of service (for example, pre-paid, basic, and premium) based on IP LaunchPad's contract management capabilities. These three levels of service are priced differently thanks to IP LaunchPad's billing capabilities.

For instance, if a basic user has a limit of 30 outbound faxes per month, and one month he sends out 50 faxes, you can bill for those extra 20 faxes at thirty cents per fax. Another example is if a corporate subscriber wants the messages she sends to have a higher priority than a consumer's messages in IP LaunchPad's message queue. The corporate subscriber will then pay more to have her messages given a "priority" label.

### **Send & Receive Notifications as Value-Added Feature**

As a result of IP LaunchPad's enhanced managed delivery services and supportive policies, you can offer *send and receive notifications* as a value-added service to your subscribers. Notifications tell subscribers when their outbound messages have been successfully transmitted to the intended recipients. Since most traditional UM solutions focus on inbound messaging, they can't provide their subscribers with an outbound notification feature, but rather, with just an inbound notification feature alerting a subscriber that he has mail. However, IP LaunchPad allows you to offer send and receive notifications as an additional service to your subscribers while simultaneously boosting your revenue.

Take, for example, the subscriber who needs to know when he has received a time-sensitive voicemail. Once the voicemail appears in his account, IP LaunchPad sends a receive notification to the subscriber's pager, and the subscriber can attend to the voicemail right away.

Consider also a subscriber who wants to send a fax to 100 recipients. The subscriber sends the fax, but it turns out that the numbers are wrong for 20 recipients. IP LaunchPad then sends him a notification (one per failed recipient and/or one notification indicating all failures) that tells him which numbers were wrong. He can

then delete those numbers from his fax broadcast list or change them to the correct fax numbers.

Another notification feature is that the subscriber can request that the first page, some pages, or all pages of each fax he sends be included with the notification. In an office where many people share a fax machine, first-page fax-notification reminds workers of who sent which fax. Or perhaps a business person is sending an article by fax and she wants to know if the article's font remained intact after being faxed to the recipient; in this instance, receiving 3-4 pages of her fax, along with the notification, assures her that the font of her article was preserved in transit. Finally, receiving all pages of a fax with a notification could be essential for lawyers, who need to maintain archives of all faxes for legal purposes. These fax notification features allow subscribers to easily keep track of which faxes went to which recipients.

IP LaunchPad will also offer notifications for wireless subscribers. For example, a subscriber is out of the office, but expecting an important email from her boss. IP LaunchPad alerts her through the notification feature of her mobile phone that the email has arrived, and she is then given the option to forward the email (and attached files) to the nearest fax machine (i.e., at a Kinko's or other office center) where the email and documents can be printed.

Notifications may be used as a value-added service to subscribers, which means that you can charge for them, particularly the pager-receive notification service for faxes or voicemail. Again, this is related to IP LaunchPad's contract management capabilities. A basic-level subscriber who doesn't normally receive notifications for outbound messages can request that a notification be sent to him for a high-priority fax so he knows that the recipient received it.

## Benefits of IP LaunchPad Services

Because IP LaunchPad is a *platform* for managed delivery services, it is able to abstract your deployed IP LaunchPad-enabled services from your network hardware (telephony equipment, back office, and support systems). This means that messaging services developers can focus on developing the service itself, and not spend time developing to disparate interfaces. This results in more rapid development and deployment of IP-based services from which you may choose.

IP LaunchPad offers the following messaging services, all of which include enhanced outbound delivery capabilities:

- **IP LaunchPad Voicemail Suite** is a suite of voice messaging services that leverages your existing voicemail network, extends your message offerings, and generates more network traffic with minimal costs. Voicemail Suite enables you to deploy enhanced messaging services, such as broadcast messaging, voicemail-to-email, and voice mailbox integration. With Voicemail Suite, your subscribers have more choice over how they receive and deliver voice messages.
- You will see substantial network growth as a result of **IP LaunchPad's Fax Suite's** value-added fax-over-IP services. Fax Suite makes it possible for you to offer your subscribers multiple, value-added fax services. Possible services that you can deploy using IP LaunchPad and Fax Suite are fax broadcasting, fax-on-demand, fax mailbox, email-to-fax, fax-to-email, never-busy send, never-busy receive desktop fax, Web fax, and fax archiving.
- Voicemail Suite and Fax Suite also enable you to transport and manage high-volume fax traffic from ISPs and resellers over your existing IP network, and its fully distributed modular architecture results in massive scalability – as voice and fax traffic grow, you can easily duplicate software modules to accommodate the increased load. The enhanced delivery capabilities of Voice Suite and Fax Suite give your subscribers value-added delivery options while also helping you grow revenue.

## Features and Benefits of IP LaunchPad

### Features and Benefits for Service Providers

IP LaunchPad's enhanced managed delivery system is the right solution to complement your existing UM system to:

- **Differentiate yourself from the competitor** IP LaunchPad's unique outbound services enable you to offer your subscribers new outbound services that do not

existing in traditional UM solutions. Subscribers can send messages to any device: a voicemail account, an email account, or a fax machine.

- **Leverage your existing UM system** IP LaunchPad helps you to keep costs low while offering subscribers enhanced delivery services by integrating easily with your existing UM solution. You benefit because IP LaunchPad leverages your current UM system while expanding the number of outbound services you can deploy.
- **Attract "road warrior" and SOHO subscribers** With IP LaunchPad's outbound messaging delivery capabilities you'll better meet the needs of "road warrior," who wants to be able to send and receive messages anytime and anywhere, as well as the needs of SOHO (Small Office/Home Office) subscribers who require the enhanced delivery options that IP LaunchPad provides.
- **Reduce your costs by minimizing subscriber churn** If your subscribers are satisfied with IP LaunchPad's enhanced delivery services, they won't have a reason to seek out other service providers. For a typical ISP, studies show that it costs \$50-100 to gain a new customer in terms of marketing, customer support, provisioning and other costs, while it costs only about \$20 to keep an existing customer.
- **Grow your revenue** Thanks to IP LaunchPad's contract management and billing capabilities, you may bill subscribers based on the services they choose resulting in increased revenue streams which your UM solution cannot provide.

### Features and Benefits for Subscribers

While traditional UM systems focus on how subscribers access their voicemail, email, and fax data, IP LaunchPad's enhanced managed delivery services give subscribers "any way they want it" message delivery capabilities. This partnership between UM systems and IP LaunchPad benefits subscribers who want to:

- **Communicate anytime and anywhere** Whether working at home, on the road, out of the country, or in their office, IP LaunchPad's outbound managed delivery services give your subscribers the means to communicate with anyone, anytime and anywhere. This means that they will always be able to send and receive important data in a time-sensitive manner. Moreover, for those subscribers who often work collaboratively on projects, communication between team members is simpler. For example, if one team member can't regularly check email, he can now receive all project information via fax or voicemail and respond to it with the messaging device of his choice.
- **Increase productivity by sending messages to any device they want** With IP LaunchPad's outbound managed delivery services, subscribers can broadcast a single message to many people using different messaging devices: mobile phone, fax, email, voicemail, and wireless devices. Moreover, a subscriber use any device to send or access data: he can fax using his email program, or receive voicemail by dialing into his mobile voicemail account. Since subscribers can use whatever device they have, there's no more searching for the "right device!"

### Round Out Your Existing UM Solution with IP LaunchPad

If you already offer traditional, inbound UM solutions, you can deploy true UM services thanks to IP LaunchPad's managed delivery capabilities. Compared to traditional UM platforms and their emphasis on message access, Open Port views a truly unified messaging solution as one that allows subscribers to choose how they deliver *and* receive messages. IP LaunchPad's outbound managed delivery allows your subscribers to access your UM system and respond to, or deliver, messages using multiple messaging applications like email, fax, or voice applications. Moreover, IP LaunchPad's platform enables you to leverage your existing voice, email, and fax services by taking advantage of the scalable technology of your current UM system.

By adding IP LaunchPad services to your existing UM solution, you'll affordably enhance your services, and by offering subscribers additional messaging services, you'll reduce subscriber churn and grow revenue.

For a list of the key ways in which IP LaunchPad complements your existing UM solution, turn to Appendix 1 at the end of this white paper.

## **IP LaunchPad Unifies Your Messaging System**

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The UM revolution is here, and if you want to remain competitive your UM solution should offer subscribers the best of inbound and outbound messaging services. According to the market watchers at Ovum, **by 2010 unified messaging could account for \$31 billion in annual worldwide revenue**<sup>3</sup>. Will your UM solution be able to compete?

Open Port's IP LaunchPad can prepare your traditional UM platform to meet the demands of the future. Unlike traditional UM systems that focus solely on inbound messaging, IP LaunchPad's enhanced managed delivery services complement your existing UM platform so that you can offer truly unified messaging services to your subscribers.

Not only does IP LaunchPad help you offer enhanced delivery services to your subscribers, it also provides you with opportunities to grow revenue. IP LaunchPad's contract management and billing system allow you to charge for each enhanced delivery service that you offer through Fax Suite or Voicemail Suite. Moreover, by offering your subscribers the delivery "any way they want it," you'll attract new subscribers and reduce subscriber churn among current customers – this generates additional revenue for you.

To learn more about how you can deploy enhanced delivery services and truly unify your current messaging solution, please contact an Open Port representative today by telephone (1-312-867-5000) or email ([info@openport.com](mailto:info@openport.com)).

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<sup>3</sup> Bushaus, Dawn. "UM What's Going On?", Net Economy, June 12, 2000.

## **Appendix 1: The Advantages That IP LaunchPad Brings to Your Existing UM Solution**

<b>Outbound Messaging Capabilities</b>	<b>Description</b>	<b>IP LaunchPad</b>	<b>Other UM Solutions</b>
Broadcast List Management	Allows subscriber to manage server-based broadcast lists he can access from fax machines, email, PC client, or Web client.  Subscriber can also select customizable templates and cover pages, and IP LaunchPad will merge the document and broadcast list together.	Yes	No
Intelligent Broadcast Flow Control	Ensures that large broadcast jobs do not hold up the delivery of other pending faxes for long periods of time. A configurable algorithm is used that interweaves individual fax jobs between deliveries of faxes to broadcast recipients.	Yes	No
Intelligent Retry Mechanisms	The ability to customize the fax retry scenarios based on the return error code supplied by the receiving fax machine. For example, different retry mechanisms can be applied to bad numbers as compared to a busy signal or voice answer. In some countries it is against the law to send a fax multiple times to a voice number.	Sophisticated	Simplistic
Tracking Message Delivery and Status	Delivery confirmation of messages can be sent to a message machine, email, pager or client device. The status on a message job will indicate the % of the job that has been successfully delivered. Error codes indicate the specific reasons why a delivery failed and successful messages report number of pages and time sent.	Yes	N/A
Service Level Enforcement	Contracts can be set up in the Contract Manager Administrator interface. You can set up a series of parameters, such as delivery and notifications options that make up "contracts" and create a series of differentiating products from it. These products can be used to guarantee service levels to subscribers, peers or resellers.	Yes	No
IP/PSTN Least Cost Routing	Patented LCR technology that uses intelligent routing to deliver messages to the server at the least expensive delivery point (based on current network traffic costs). For example, IP LaunchPad can receive a single document, and based on LCR, send only one copy of the document and the necessary recipients from the broadcast list to the closest POP (Point of Presence) for delivery. This saves precious bandwidth.	Patented	No
Document or Text to Fax Conversions	IP LaunchPad provides rendering for 220+ document types, many languages, and fonts. These techniques also support the conversion of the document's original paper size and orientation. Subscribers will be able to deliver any printable document to a fax machine using email, Web client, or PC client.	220+ Document Types	Text Only
Wholesale & Peering Relationships	Develop new partnering strategies that increase your network traffic and achieve termination points outside your networks' geography.	Yes	No
Back Office SDK	Subscribers access the Service Management Tools through a secure login that provides access to specific tools for each individual to do his job based on his permissions.	Yes	No
Desktop Fax	Fully featured localized and brandable Microsoft Windows application that gives the subscriber a convenient, reliable, and secure tool for desktop faxing.	Yes	No

## **About Open Port Technology**

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Open Port Technology, Inc., founded in 1993, is a pioneer in the Internet messaging industry, and is one of the top 10 IP telephony vendors (Piper Jaffray, February 1999). Open Port has deployed global IP messaging services for leading Internet and telecommunications companies, including Cable & Wireless, Cable & Wireless Hong Kong, Cable & Wireless IDC, AUCS, Interpath, Tele Danmark, Guangdong PTA (China Telecom), Net2Phone, and MCI WorldCom Inc. Open Port's technology is at the core of the UUfax service from UUNET, one of the world's first global, carrier-class Internet fax solutions. In addition, Microsoft Corp. holds a minority investment in and is partnering with Open Port to add IP-faxing capabilities to Microsoft® Windows® NT Server-based products. Open Port's headquarters are located at 676 North St. Clair Street, Chicago, Illinois 60611. Additional information can be obtained by contacting Open Port by telephone (+1.312.867.5000), email ([info@openport.com](mailto:info@openport.com)), or via the Internet ([www.openport.com](http://www.openport.com)).

For more information, please contact your Open Port sales representative, or send an email to [info@openport.com](mailto:info@openport.com)