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AN ACCELLION WHITE PAPER

# Green Digital Logistics Solution

REDUCE COSTS – LOWER CARBON FOOTPRINT



Accellion  
**GREEN**

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**The all too common practice of using overnight delivery to move large files, is not only environmentally unfriendly it is time-consuming, non secure and costly.**

## Executive Summary

The explosive growth of digital information is rapidly changing the shape of business. Now, more than ever before, businesses require instantaneous sharing of information. Driven by globalization and new applications that create massive amounts of data, the implementation of systems for sending and receiving large digital files has not kept up with business needs.

The opportunity for increasing business efficiency and reducing costs by enabling easy and efficient transfer of large file transfers is largely untapped in today's enterprise organizations. The all too common practice of shipping overnight envelopes to move large files, is not only environmentally unfriendly, it is also time-consuming and costly.

This whitepaper offers readers a perspective on the growth of digital data and the opportunities for deploying a Green Digital Logistics solution that both manages the transfer of digital data of an organization and also reduces the environmental impact of moving this data. Readers are presented with an analysis of the environmental impact of traditional methods for sending large files including overnight shipments and document printing and the quantifiable green benefits that can be realized through the deployment of an enterprise-wide IT solution for sharing large files.



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**While companies will acknowledge their need to move at electronic speed, their file transfer systems are often stuck in first gear.**

## The Explosion of Digital Data

A recent report from IDC estimates that 161 billion GB (161 exabytes) of data was created in 2006 and this number is expected to grow to 988 exabytes by 2010. To put these numbers into perspective, 5 exabytes of digital data would be equivalent to 370,000 Libraries of Congress. This explosion of digital data is a direct result of the invention, deployment and use of digital technologies throughout the world in every aspect of our lives including work, home, school, and leisure. By 2010 IDC estimates that companies will bear the burden of having to secure and manage more than 85 per cent of this data.

## Transferring Data at Electronic Speed

Not only the quantity, but also the manner in which we share enterprise information is evolving rapidly. In today's global economy, data streams and data sources are globally distributed creating organizational challenges. In addition, the ease and speed with which data is generated and changed puts extra demands on IT systems to be able to keep pace with global data distribution. When important information was delivered by a messenger carrying a forked stick, the world just seemed a much simpler place.

In today's digital world the emphasis is on speed. When FedEx first launched its overnight delivery service a cheer went up from businesses around the globe, information could now be moved faster and that was good for business. With the advent of the Internet, the needle on the speed dial was moved even higher with the availability of instantaneous email communication. It didn't take long for people to start trying to get the same instantaneous communication of files. People began to force the email paperclip into overdrive as their desire to share more and more data led them to force more and more data through email.

Five years ago, most people would use e-mail to share reports, spreadsheets and Power Point presentations. For larger data sharing, they typically relied on custom file transfer systems. Today, presentations, graphics and spreadsheets are much bigger and are used much more broadly. In addition, application files and sometimes even whole databases are regularly shared as part of critical business processes. Examples of large files that are routinely sent today range from sensitive financial documents for complex financial transactions, design documents for engineering firms, research databases for pharmaceutical companies, and video files for advertising and media firms.

While companies will acknowledge their need to move at electronic speed, their file transfer systems are often stuck in first gear.



**Many files today are just too big for corporate email systems to handle, especially given corporate best practices limiting file attachments to 10MB or less.**

**Large file attachments slow down email performance for everyone and drive up email storage costs.**

## Inadequacy of Current IT Systems for Moving Large Digital Files

Of major concern for organizations is the increasing quantity of data being moved using IT workaround solutions.

Many files today are just too big for corporate email systems to handle, especially given corporate best practices limiting file attachments to 10MB or less. As a result many users forward their email to a Web-based mail service such as AOL, Google, MSN, or Yahoo to avoid small attachment size limits or overfull mailboxes. The problem with this approach is that the email messages as well as the attachments are sent without regard for corporate security policies and tracking, and are sent unencrypted through public servers which could potentially be accessed by unauthorized parties.

FTP is another inadequate file transfer system. Not only is it unsecure, it is complicated and difficult for the average person to use and the setup often requires IT intervention. While SFTP is more secure, it is even more difficult to set up, as decryption software needs to be installed on the recipient's computer.

Another frequently used, time consuming and expensive file transfer workaround is putting unencrypted information on CD-ROMs or "thumb drives" and sending them via courier or overnight delivery services such as FedEx, DHL or UPS.

Organizations should be concerned about these IT workarounds since they are usually, risky non-auditable and non-compliant with legislative mandates, including SOX, that dictates appropriate information handling procedures. Yet they keep being used. Why is this? Because they are usually the only readily available options people have to send large files and get their work done. If companies want to decrease their data leakage and reduce the risk of regulatory breaches, now is the time to implement secure file transfer solutions that end users will embrace!

## Email File Attachments are the Problem – not a Solution

Email was not architected for moving large digital files. While the paperclip is a tempting feature for attaching a file to an email, frequent large files transfers greater than 10MB can easily bring an email network to its knees. To state it simply, large file attachments slow down email performance for everyone and drive up email storage costs.

### ESCALATING EMAIL STORAGE COSTS

Large files attached to emails create an email storage nightmare, with large files representing greater than 75% of the content stored on an enterprise email system.

Not only are individual large files sizable, but depending on which email system is deployed, each large file may have several instances created on the email system. For example, sending a large file attachment to 10 people via Lotus Notes, results in at least 10 instances of the large file on the Lotus Notes email server – subsequent forwarding of the email results in even more instances being created. Using Microsoft Exchange, a large file attachment will create additional file instances on each email server.



To get out of the email storage rat race IT should be looking at offloading large files from the email system.

#### FILES THAT LAST FOREVER ON THE EMAIL SYSTEM

Once a large file is attached to an email system there are no automated tools within email for cleaning up these files once they are no longer needed. This means that once a large file is stored on an email server it can take up email storage for a long time. With email typically running on very high end servers, with rigorous data backup systems in place, this is expensive storage to be tying up long term for large digital files.

#### GETTING OUT OF THE EMAIL STORAGE RAT RACE

To get out of the email storage rat race IT should be looking at offloading large files from the email system and moving large file transfer to a dedicated IT system that will not only store just one instance of the file but also employ automatic file deletion policies to avoid continual demand for more storage. Offloading large files from email is not just an exercise of moving storage from one place to another. It is about fundamentally addressing how to transfer large files in an efficient manner at reduced cost.

### Overnight File Delivery – Makes No Sense Financially or Environmentally

Use of overnight and express delivery services such as FedEx, DHL and UPS, for sending large documents should be of concern to organizations. Overnight delivery is falling out of favor as a business practice for sending large documents because of cost, security, expediency and environmental concerns. For many companies this realization has only recently emerged.

#### COST

The size of FedEx bills, especially with recently applied fuel surcharges, is starting to raise the eyebrows of CFOs. Do you know what your company is spending on overnight shipments of digital data and files? One Accellion customer estimates that they save \$750,000 annually in eliminated FedEx costs by implementing a secure file transfer solution that actually works. With average overnight packages costing \$10/package (domestically) and greater than \$20/package (internationally) there is a significant financial upside to implementing a digital logistics system for moving digital data..

#### SECURITY

Every week there is a headline about disks containing sensitive data getting lost in transit. The package does not arrive; the package arrives but is lost within the organization; the person leaves the package in their car which is broken into. Digital data that is put onto CD, thumb drive or printed, is much easier to misplace than digital data that sits on a secure server.

#### EXPEDIENCY

Overnight Delivery as part of a business process creates an unnecessary information bottleneck. While FedEx and others have done wonders in improving the speed of traditional mail, overnight delivery is a snail compared to the Internet. There is no contest. Overnight delivery is an eternity in the Internet era.



## ENVIRONMENTAL CONCERNS

Increasing awareness by corporations of their responsibility to the environment has brought the spotlight on many business practices that can be substantially greener. The environmental toll of shipping packages via trucks and planes is tremendous. Business processes that involve vehicles that release CO<sub>2</sub> high up in the atmosphere, far away from any carbon sink, are high priority targets for Green initiatives. Very soon carbon will not be viewed as free. Just as individuals are now taking a close look at their own carbon footprint and are looking for ways to reduce car trips, enterprises are similarly looking at their use of planes, trains and automobiles when they select overnight delivery services such as FedEx, DHL and UPS.

### The Environmental Impact of Overnight File Delivery

Overnight delivery of large files is an environmental nightmare. If large digital files are printed and then sent via overnight delivery there is the double environmental jeopardy of using up trees to make paper and then also generating CO<sub>2</sub> emissions from trucks and planes for package delivery. Burning CDs rather than printing files is only marginally better since plastic CDs, even if only a fraction of the CD is used, end up in landfill.

#### PRINTING DOCS & BURNING CDS

Printing digital files including documents, spreadsheets, presentation slides, or reports of any kind, uses paper which comes from trees. It is so obvious it hardly needs saying – you would think. The numbers are staggering:

- One TeraByte of data represents the equivalent of 50,000 trees processed into paper and printed
- One TeraByte of data represents the equivalent of 2,000 CDs

#### PLANES, TRAINS & AUTOMOBILES

Overnight delivery provides door-to-door delivery that is made possible through the use of an extensive fleet of trucks and planes circling the planet and generating large amounts of CO<sub>2</sub> emissions. In sharp contrast digital delivery sends digital information from desktop-to-desktop, electronically.

Every gallon of burnt jet fuel produces in excess of 20lbs of CO<sub>2</sub> emissions. With a DC-10 burning 3,130 gallons/hour that means every hour of flight used for overnight delivery is generating in excess of 60,000 lbs CO<sub>2</sub>/hour. With an overnight envelope spending on average 4 hours in flight (domestic) that represents more than 240,000 lbs CO<sub>2</sub> or 120tons CO<sub>2</sub> generated.

By using digital delivery for digital files corporations are fighting back against green house gas emissions and the pollution of the environment.

**The environmental toll of shipping packages via trucks and planes is tremendous.**

## Getting to Green File Transfer

Increasingly corporations are looking to IT to propose and initiate projects that not only support a company's financials but also its corporate responsibilities to the environment. Corporations are paying close attention and planning ahead for industry regulations and mandates requiring reductions in carbon emissions. Already in Europe, there are systems in place requiring large carbon producers to either reduce carbon emissions or purchase carbon offsets. In the United States corporate initiatives to reduce carbon emissions are currently voluntary and normally driven by implementation of technology improvements that not only have green benefits but also have significant cost benefit long term to the corporation.

Many Green IT projects initiated in 2007 focused around the data center and server virtualization. However in December 2007 Gartner issued a set of guidelines for Green IT entitled "10 Key Elements of a 'Green IT' Strategy," that emphasized the need to broaden the scope of the Green IT strategy beyond solely the data center

- *Define an environmental policy, identifying and prioritizing the issues the organization wants to address. Do this within the context of the enterprise's broader environmental and corporate social responsibility policies.*
- *Have the IT organization be responsible for the energy efficiency of the data center and IT equipment.*
- *Make the data center a priority, but understand the green IT strategy must extend beyond that.*
- *Create an environmental performance dashboard based on the enterprise's and IT organization's environmental policy.*

Source: "10 Key Elements of a 'Green IT' Strategy," Gartner Inc., Dec. 7, 2007



## Getting Credit for Green File Transfer

The Accellion Green Digital Logistics Solution enables companies to reduce their carbon footprint. In most cases the solution will pay for itself in less than a year due to decreased email storage costs and physical carrier costs. Instantaneous delivery will also speed up business processes.

The Accellion Green Digital Logistics Solution comprises a selection of components that are based on Accellion secure file transfer technology already deployed by over 400 companies worldwide. Leading companies including Ogilvy, P&G, Bridgestone, Activision, and Allergan are already realizing the benefits of Accellion’s innovative technology. Accellion enables companies to reduce costs while maximizing digital file transfer speed and security. The ease of use of the Accellion solution enables high adoption rates and minimal IT support. Every file sent via Accellion technology is saving trees and CO2.

Using Accellion secure file transfer is just like sending an email, only easier. Users send an email and “attach” a file, however when using Accellion the file is not sent through the email system, it is instead encrypted and transferred via SSL, to a secure virtual appliance. Recipients receive an email containing a secure Green link which they click on to download the file. All files sent via Accellion file transfer are tracked and secured providing organizations with an audit trail for the transfer of corporate files.

The major components of the Accellion Green Digital Logistics Solution are:

**GREEN WEB USER INTERFACE** – provides an easy to use, intuitive interface for internal and external users that can be custom branded to match a corporate identity.

**VIRTUAL APPLIANCE**– enables rapid green deployment, optional hardware-based appliance.

**GREEN CORPORATE DASHBOARD** – provides corporate dashboard indicating pounds of CO2 saved to date via Accellion Green

The Green benefits of the Accellion Green Digital Logistics Solution are significant and come from three key sources: reduction in overnight shipments, reduction in printing of files and use of virtual appliance form factor.

### Accellion Green Digital Logistics Solution

Source of Environmental Benefits	Green Benefits
Reduction of overnight shipments	Reduction in CO2 emissions
Reduction of file printing	Reduction in paper usage
Virtual Appliance Form Factor	Reduction in energy consumption



Accellion has filed for a patent to earn carbon credits for the reduction of CO<sub>2</sub> emissions resulting from the use of the Accellion Green Digital Logistics Solution, these carbon credits could be used by a corporation as carbon offsets.

## Conclusion

The opportunity exists for corporations to increase business efficiency, reduce costs and realize significant green benefits by implementing a Green Digital Logistics solution for sending and receiving large digital files. Shipping digital files via overnight delivery is environmentally unfriendly, slow and costly. Sending large digital files via email drives up email storage costs and drives down email performance. Accellion's Green Digital Logistics Solution offers an IT solution that delivers substantial Green financial and environmental benefits.



## About Accellion

Founded in 1999, Accellion, Inc. is a premier provider of managed file transfer solutions with an extensive customer base covering industries such as advertising/media production, legal, manufacturing, healthcare, consumer goods, higher education, and more.

Accellion provides an enterprise file transfer solution that is secure, economical and easy to use for both end users and IT management and offers organizations considerable Green benefits. Unlike email and FTP that can no longer meet the evolving security and business requirements, Accellion enables enterprises to eliminate FTP servers, create Sarbanes Oxley compliant business processes, improve e-mail infrastructure performance, and reduce an organizations carbon footprint.

Accellion is a privately held company headquartered in Palo Alto, California with offices in North America, Asia and Europe..

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