

■ PC Repair. In Minutes.  
**reimage**

**Automating PC Repair  
for Optimized Support Efficiency  
and Reduced Operating Costs**

There are 1 billion computers in the world today (C-I-A, 2007) and each one is fixed, on average, every five years (Williams, 2003). To meet this demand, there are roughly 1,250,000 computer technicians supporting the 200 million PCs requiring repair each year for problems that are equally divided between hardware and software troubles. These malfunctions were projected to cost the business sector \$80 billion in 2007 alone (Gartner Dataquest, 2003).

Indeed, moving beyond the high cost of software maintenance and support there is another cost involved which needs to be taken into account: fatigue. Working in the PC repair industry is tough. The hours are long and the deadlines are daunting. Making matters worse, most repair professionals are expected to solve an infinite number of PC problems, occurring randomly, within a reasonable time frame – usually 2 hours. The work is repetitive, the pressure is high and the demands on a technician's performance from frequently unforgiving and ungrateful technologically un-savvy clients are heavy.

**Manual PC repair is on the retreat but uncontrolled IT environments still pose a challenge**

## Overview

Until recently, the only way to repair a broken PC, caused by dysfunctional software, was an arduous, manual and time-consuming effort by PC technicians. Restoring a PC with software problems usually takes hours, often results in loss of user data and is an enormous expense for PC service companies.

Overall, things are looking brighter for individuals involved in the PC repair process. In the larger business context, uncontrolled IT environments are becoming increasingly rare. In the controlled IT environment, the stability of desktops has increased and support call times have been reduced. The crux of the problem, however, remains the uncontrolled IT environment in other situations which, unfortunately, still represent the majority of such cases.



Image backup and restoration, anti-virus software and manual repair are insufficient in uncontrolled IT environments

## Unsatisfying Recent Innovations for PC Repair

Indeed, the process for repairing a computer subject to an infinite array of problems can be both time-consuming and frustrating. Over time, several innovative solutions have emerged that are directed at pre-empting software damage.

- Image backup and restoration: this whitewash/ rollback method results in a re-imaged computer in which all software installed prior to the image creation being lost.
- Anti-Virus & Spyware: a 50-minute long process that inoculates bad files but does not resolve issues related to dysfunctional, damaged software.

Another option, the manual post-software damage solution is a hands-on solution:

- Manual Repair: a technician or support agent attempts to resolve the malfunction by looking at a few symptoms, using utilities and personal experience to pinpoint the problem and repair it. In many cases, the symptoms do not reveal the problem or the repair is too complicated and the technician chooses to backup and reinstall the software.

However, the problem with all of these solutions is their limited ability to repair damaged software with no prior preparation and/or with preserving the integrity of user data.

The current practice with controlled IT environments is to employ a single, corporate image to which workstations revert in cases of software corruption. These pre-emptive practices perform their function well but cannot address faults once they have occurred.

An optimal solution addresses uncontrolled IT environments

## The PC Repair Automation Solution

Ideally, PC repair automation, a software rollback action, could take place with no prior setup and with no data loss for the user. The value in such a solution exists only if it is significantly faster than the alternatives. To date, the only solution which repairs software and maintains user data is the manual work of a PC technician.

A manual repair, with no prior backup and no data loss for the user, is a slow and tedious process. Such a repair can take up to 48 hours of labor-intensive work. For repair professionals, PC repair automation would markedly reduce or even eliminate the necessity for the manual software repair process.

The benefits of such a solution for businesses and PC repair professionals are bountiful. Such a solution addresses the real need for automated PC repair which requires no prior setup and is faster than the manual repair process performed by a PC technician. Because repair time would be reduced and the repair would be more thorough, productivity would enjoy a consequent boost. For businesses, the possibility of an automation repair process represents a significant reduction of support costs and thus, lower operating expenses.



## Solution Pre-Requisites

When seeking such a solution, it is important to factor the following criteria when selecting a PC repair automation supplier:

1. **No prior setup needed** – pre-installing a snapshot solution is, unfortunately, not the default feature in desktops in the majority of cases. Having a PC repair automation solution that does not require advanced setup is crucial.
2. **Preserving customer data** – any repair process which results in the loss of user data causes severe financial losses. Preserving the integrity of the customers data is a top priority in the PC repair process. Any loss of user data equals time-consuming restoration. The only criterion for preserving customer data, in PC repair automation, is to fully and completely maintain user data.
3. **Speed of repair** – as the analysis process of a computer repair professional averages 30 minutes, any repair process which significantly exceeds this time frame is irrelevant.
4. **Repair automation** – if the repair tool requires hands-on attention from the technician, it defeats the purpose of PC repair automation.
5. **Quality of repair** – the success ratio of the repair process is a critical factor. Only solutions which have at least a 90% success rate should be considered.
6. **Undo option** – at times, a repair process can be unsatisfactory due to a slough of variables. As such, it is imperative to have a software rollback option.
7. **Support level** – any company that provides PC repair automation solutions or services must have robust support operations and a proven track record of customer and technical support experience.



Reimage is an online repair tool that gives PC technicians the power to quickly identify and surgically replace broken system software, leaving user data untouched

## The Reimage Solution

Reimage, established in 2007, is a developer of a unique web-based professional diagnostic and repair service which drastically reduces time per repair, and improves productivity.

### Benefits Include:

#### One click, PC fixed

- A single click allows for the scan, analysis and repair of malfunctions.
- Reimage is streamlined. Following a reboot, the computer is fixed.

#### Unprecedented quality of computer repair

- The end user enjoys a computer whose performance is as good as new.
- Training is history as software repair is no longer part of the complicated computer repair process.
- Each repair is a result of thousands of hours of experience packed into a scan, analysis and restoration process.

#### Safeguards user data

- Nothing is ever erased, or deleted (Emails, documents, etc.).
- User environment is preserved, perfectly.

#### Fast results

- Fixes a PC, on average, in 30 minutes
- Each support incident will end, from a technical perspective, within the hour.

#### PC Repair on the Fly

- Reimage is a web based service that operates through the browser on an ad hoc basis and does not require prior preparation.
- As there is no need for advance setup, all software-related problems can be resolved on the spot. This allows reaching out to new customers.
- If the Internet is inaccessible there is a boot CD usage option.

#### A Service-Oriented Solution

- The philosophy behind Reimage is: "we fix it, you take the credit." The service stays behind the scenes, fixing PCs while you take the glory.
- A dynamic white label option allows uploading any picture to replace the Reimage default logo and make PC repair automation your own.
- The Reimage service offers automatically generated reports for end user's on repair quality, computer performance operation and suggested (editable) technical recommendations.
- The service can also be activated through an unbranded website, preserving Reimage's anonymity.



## “Smart Reimaging” Makes a Difference

Reimage.com offers value to all organizations that require a data-safe, time-effective and automatic repair solution.

- Internet Service Providers
- Repair Service Providers
- Managed Services Providers
- IT Administrators
- Stationary PC Technicians
- Mobile PC Technicians

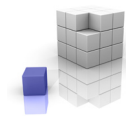
Each business profile enjoys specific benefits from using the Reimage.com solution. The usage of PC repair automation, with no prior preparation and maintaining user data has different implications for different customer profiles. Reimage.com decreases the total cost of ownership through increased employee productivity.

- **Internet Service Providers** – offering technical services that are required to use or operate Internet services ISPs incur high support costs. These costs are linked to HR expenses, leading to outsourcing, much to their customers’ dismay. Additionally, ISPs are challenged by *out-of-scope* calls unrelated to connectivity issues, which account for 50% of all support calls (Haugsted, 2007).

Reimage turns such *out-of-scope* calls into a business opportunity by providing a self-help option on the ISP’s website which allows customers to Reimage their PCs, giving the ISP functional PC support and an additional source of income. Offering PC repair options beyond the ISP’s customer base can cause traction from competition, and provide a differentiating, strategic, edge.

Total Cost of Ownership is reflected in the reduction of support calls by up to 40% by directing customers to PC repair automation. This increase in stable PCs for customers and the ability to follow up on the repair process should increase ISP revenues while maintaining a workforce that does not require familiarity with software-related problems, thus cutting payroll and training costs.

- **Repair Service Providers** – savings are based on the nature of service provided: onsite, offsite or remote. The value in each function is obvious.
  - *Onsite* – each software support incident will last no longer than 30 minutes through the process of deduction: after the automated PC fix, if the computer is still dysfunctional the problem must be hardware related. Hardware problems are dealt with offsite, anyway.
  - *Offsite* – in the repair lab, the technician can fix hundreds of computers simultaneously, ensuring that their software is fully functional.
  - *Remote* – similar to the ISP, a self-help function ensures that support agents are not tied up on the phone, providing support. Remote support has never been easier. Reimage is operated from afar and the agent gets back to the customer once the process is completed. No need to spend hours tinkering with the PC by remote access.



- **Managed Services Providers** – these companies provide support services for customers with differing levels of technical knowledge. This can change the support time for the MSP. Generally speaking, Reimage.com should serve as a self-help service, thus, providing the support team with a “clean slate” with which to work.

Average support time while working with the customer is about 30 minutes. Electing to use Reimage prior to making the support call should result in a 50% reduction of time spent with a client.

- **IT Administrators** – these professionals must deal with multiple computers on a daily basis and, when not backed up, must salvage priceless company information from dysfunctional PCs.
- **Off-Site PC Technicians** – these PC technicians usually operate in repair labs and are bound by a labor-intensive repair process. Reimage allows for a 2-hour process per PC to be narrowed down to 30 minutes which can be performed on multiple PCs at the same time.
- **On-Site PC Technicians** – each software support incident will last no longer than 30 minutes through the process of deduction: after the automated PC fix, if the computer is still dysfunctional the problem must be hardware related. Hardware problems are dealt with offsite, anyway.

## Technology That Ensures Excellent Results

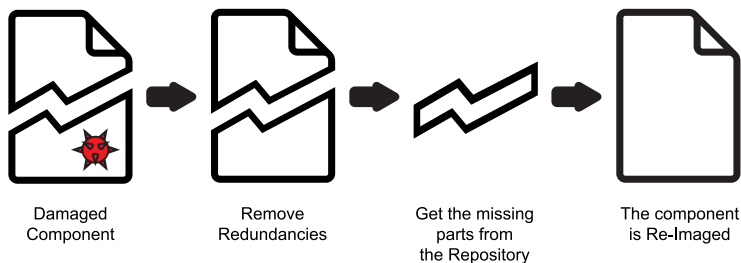
**Reimage has completely automated the entire manual process of identifying and repairing software problems, emulating the human brain in a revolutionary way that redefines the very concept of PC repair.** Instead of looking at several superficial symptoms, our technology looks at every single object and interlinked dependency simultaneously and understands the global context. Having established this context, we compare it with our “experience” in a form of 4 million - and growing - objects and dependencies on the Repository server. Reimage’s technology surgically pinpoints only faulty objects and dependencies without touching user’s data and preferences. Then, we use the Repository to correct the malfunction even without prior preparation. At the end of this 30-minute process, the computer is as good as new and user data is intact.

Reimage’s patent-pending technology emulates a PC technician’s reimaging process without jeopardizing any of the user’s data. This significantly improves the decision- making and execution processes of the repair. Instead of evaluating the most visible symptoms, our technology scans hundreds of thousands of potential causes for disruption. This scan enables Reimage to quickly and efficiently repair the PC.



### The New Concept behind Reimage

Any software component can be brought back to its original working state, as if it were just reinstalled, by simply restoring its missing parts and by removing the redundant ones. By accessing the millions of working components within the proprietary Reimage repository, the technology can replace and fix any missing or corrupt parts.



The service has a repository which “learns” on a daily basis how to fix applications based on how they look when they are fully functional. The repository is utilized for component recognition and restoration. Additionally, the repository handles more than 4 million logical items and is growing fast.

Reimage technology was registered in 2006 at the US Patent and Trademark Office.



## Contact Us

To see how you can benefit from Reimage.com, to learn more about the Reimage.com solution or to arrange a Reimage.com demonstration, please visit [www.reimage.com](http://www.reimage.com) or call +1 (877) 561-7486.

## Works Cited

CBC News. (2007, 10 03). *Getting Gouged by Geeks*. Retrieved 10 03, 2007, from CBC News:

<http://www.cbc.ca/marketplace/2007/10/03/geeks/>

C-I-A. (2007, 09 24). *PCs In-Use Reached nearly 1B in 2006 USA Accounts for Over 24% of PCs In-Use*. Retrieved 1 29, 2008, from Computer Industry Almanac:

<http://www.c-i-a.com/pr0907.htm>

Gartner Dataquest. (2003, 05 27). *IT Services Market Five-Year Growth Forecast Revised*. Retrieved 01 29, 2008, from Gartner Dataquest:

[http://www.google.com/url?sa=t&ct=res&cd=1&url=http%3A%2F%2Fwww.cata.ca%2Ffiles%2FPDF%2FResource\\_s%2Fhightech%2Freports%2Findestudies%2FITServicesMarket5YearGrowthForecastRevised.pdf&ei=SG-xR8jLFaTGnAPi3pDzDQ&usq=AFQjCNGFBcNQdnimMUotZFeHxWr1VqvcRw&](http://www.google.com/url?sa=t&ct=res&cd=1&url=http%3A%2F%2Fwww.cata.ca%2Ffiles%2FPDF%2FResource_s%2Fhightech%2Freports%2Findestudies%2FITServicesMarket5YearGrowthForecastRevised.pdf&ei=SG-xR8jLFaTGnAPi3pDzDQ&usq=AFQjCNGFBcNQdnimMUotZFeHxWr1VqvcRw&)

Haugsted, L. (2007, 07 23). *Abort, Retry*. Retrieved 08 22, 2007, from Multichannel News:

<http://www.multichannel.com/article/CA6462005.html>

Vilaboy, M. (2007, 05 01). *Keeping Out of Scope Support In Line*. Retrieved 28 01, 2008, from IP Business:

[http://www.ipbusinessmag.com/articles.php?article\\_id=44&issue\\_id=26](http://www.ipbusinessmag.com/articles.php?article_id=44&issue_id=26)

Williams, E. (2003). Extending PC lifespan through secondary markets. *Electronics and the Environment* , 255- 259.

