

# THE DIGITAL ERA

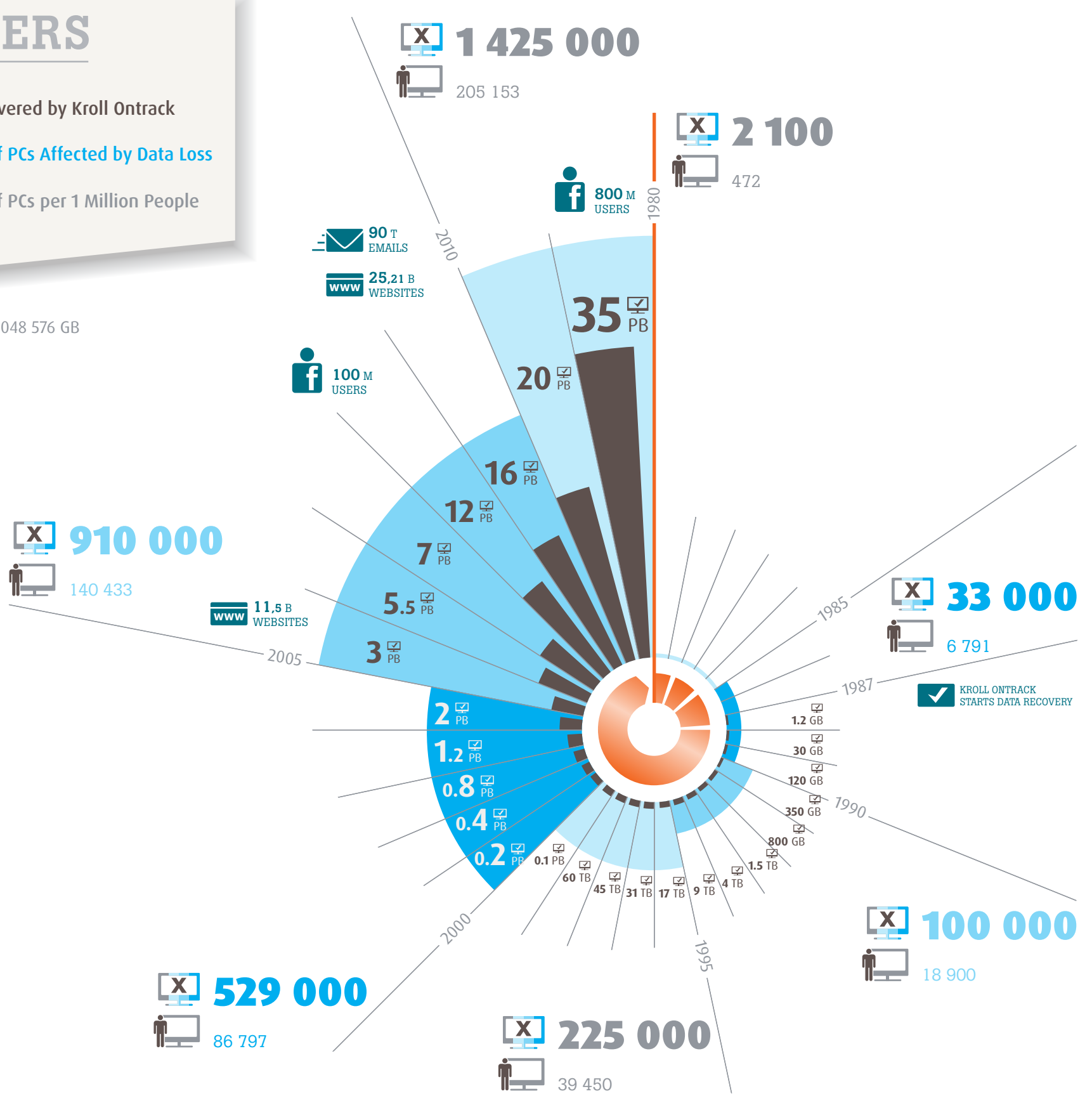
How our life has changed into a digital one  
Data creation, data loss and its recovery over time



## NUMBERS

- Data Recovered by Kroll Ontrack
- Number of PCs Affected by Data Loss
- Number of PCs per 1 Million People

1 PT = 1 024 TB = 1 048 576 GB



## EVENTS

Brief history of digital life bit by bit

## IT Events

### Kroll Ontrack Events

	1980	Flash memory is invented	Seagate releases the first 5.25-inch hard disk Winchester	Home microcomputer ZX-80 the best known in Europe
		First IBM PC to come with an internal hard drive as standard		
	1982	Maxtor disk manufacturer is founded	Compaq is founded and becomes IBM's biggest competitor	
		SyQuest introduces the first portable hard disk with a capacity of 5 MB	Microsoft introduces File System NTFS	Beginning of the Internet. ARPAnet
	1984	Apple introduces Macintosh computers		
<b>Kroll Ontrack starts up</b> Release of legendary <b>Disk Manager</b>		Oracle Corporation releases Oracle version 5, which supports the client-server model		
	1986	SCSI is officially standardized by the American National Standards Institute	One of the first examples of digital forensics - Clifford Stoll pursuit of hacker Markus Hess	
<b>First data recovery case in company history</b>		The beginning of RAID storage	FAT 16 File Allocation Table is created	
	1988	Robert Morris releases the Morris worm	Taiyo Yuden company releases a CD-R	
		Digital Data Storage (DDS) is a format for storing and backing up computer data on magnetic tape		
	1990	Linear Tape-Open (or LTO) a magnetic tape data storage is developed	The rise of HTML	
<b>First onsite recovery in military conditions during Desert Storm</b> in Kuwait by Greg Olson and Stuart Hanley		Beginning of WWW	Famous Michaelangelo virus	
<b>Massive data recovery after attack of Michelangelo virus</b>	1992	First extended file system (EXT) created especially for Linux		
		First full Linux distribution		
	1994	CompactFlash (CF) is produced		
<b>Official launch of Computer Forensics services</b>		M-Systems introduces flash-based SSD drives	EMC develops the concept of network-attached storage	Hacker Kevin Mitnick is arrested
<b>Launch of Ontrack EasyRecovery software</b>	1996	IBM computer Deep Blue beats chess master Garry Kasparov	Microsoft introduces FAT 32	
<b>First recovery from SSD Drive</b>		The term cloud computing is used for the first time	Google.com domain is registered	First mobile device with the Internet - Nokia 9000i
<b>First Remote Data Recovery over Internet connection</b>		MySQL is introduced	Apple introduces the iMac	
<b>Recovery of data from hard drive after 20 months in the sea</b>		VMware introduces full virtualization		
<b>Retrieve presentation for the Nagano Olympics Committee</b>		Millennium bug - The Year 2000 problem	Microsoft Pocket PC 2000 is introduced	Love hurts - virus 'I love you'
<b>Massive data recovery cases after millenium bug [Y2K]</b> Kroll Ontrack recovered data and evidence of data sabotage in <b>Omega Company</b> case - important US government contractor	2000	DVD-R appeared on the market	Quantum sells its hard drive business to Maxtor	Wikipedia is founded
<b>Data recovery after terrorist attack on WTC</b>		Blu-ray technology is introduced	Hitachi takes over IBM's hard drive business	
<b>Launch of Ontrack PowerControls e-mail recovery solution for Exchange</b>	2002	LinkedIn is launched	The game Second Life is released	
<b>Data recovery from onboard scientific computers after Space Shuttle Columbia crash</b>		MySpace is launched	The photo sharing site Flickr is launched	Facebook is created
	2004	Toshiba produces the first commercially available disk drive (1.8") using perpendicular recording technology	Maxtor is acquired by Seagate Technology	YouTube is created
<b>Massive data recovery after Hurricane Katrina</b>		The company Cloud Computing introduces the idea of securely storing unlimited amounts of data without physical onsite hardware	Amazon.com opens AWS cloud	
<b>Kroll Ontrack acquires European competitor Norwegian Ibas Vogon</b>	2006	Apple introduces iPhone	Dropbox is founded	Google releases Android
<b>First Recovery for the cloud</b>		Apple introduces the MacBook Air	Worldwide notebook computer shipments exceed desktops for the first time	
<b>Recovery of Gothenburg Rescue Service Data Center flooded by sea</b> Kroll Ontrack launched recovery technologies from complex VMware environments	2008	Microsoft releases Virtual PC		
<b>Saved critical pieces of world history from WWII when we recovered &amp; converted data from 300 disks</b>		130 exabytes of data is stored in the cloud	Stuxnet worm is first discovered	Apple releases iPad
2010		Microsoft introduces Office 365		
<b>Data recovery after tsunami in Japan</b>				

## Sources

- [http://en.wikipedia.org/wiki/Flash\\_memory#History](http://en.wikipedia.org/wiki/Flash_memory#History)
- [http://www.pcworld.com/article/127105/timeline\\_50\\_years\\_of\\_hard\\_drives.html](http://www.pcworld.com/article/127105/timeline_50_years_of_hard_drives.html)
- <http://labspace.open.ac.uk/mod/resource/view.php?id=366445>
- [http://en.wikipedia.org/wiki/History\\_of\\_IBM](http://en.wikipedia.org/wiki/History_of_IBM)
- <http://www.computerhope.com/history/198090.htm>
- <http://cleancover.hubpages.com/hub/historystoragedevice>
- [http://en.wikipedia.org/wiki/Clifford\\_Stoll](http://en.wikipedia.org/wiki/Clifford_Stoll)
- [http://en.wikipedia.org/wiki/History\\_of\\_the\\_Internet](http://en.wikipedia.org/wiki/History_of_the_Internet)
- <http://en.wikipedia.org/wiki/Macintosh>
- [http://en.wikipedia.org/wiki/Oracle\\_Database](http://en.wikipedia.org/wiki/Oracle_Database)
- [http://www.computerworld.com/article/87093/The\\_Story\\_So\\_Far](http://www.computerworld.com/article/87093/The_Story_So_Far)
- <http://en.wikipedia.org/wiki/NTFS#History>
- [http://en.wikipedia.org/wiki/File\\_Allocation\\_Table](http://en.wikipedia.org/wiki/File_Allocation_Table)
- [http://en.wikipedia.org/wiki/Taiyo\\_Yuden](http://en.wikipedia.org/wiki/Taiyo_Yuden)
- <http://cs-exhibitions.uni-klu.ac.at/index.php?id=297>
- [http://en.wikipedia.org/wiki/Linear\\_Tape-Open](http://en.wikipedia.org/wiki/Linear_Tape-Open)
- <http://www.computerhope.com/jargon/h/html.htm>
- [http://en.wikipedia.org/wiki/Michelangelo\\_\(computer\\_virus\)](http://en.wikipedia.org/wiki/Michelangelo_(computer_virus))
- <http://www.linuxdevelopernews.com/linuxdevelopernews-81-20111213ABriefHistoryofEXT2EXT3andEXT4.html>
- <http://en.wikipedia.org/wiki/Linux>
- [http://en.wikipedia.org/wiki/Compact\\_flash](http://en.wikipedia.org/wiki/Compact_flash)
- [http://en.wikipedia.org/wiki/Kevin\\_Mitnick](http://en.wikipedia.org/wiki/Kevin_Mitnick)
- [http://en.wikipedia.org/wiki/Solid-state\\_drive](http://en.wikipedia.org/wiki/Solid-state_drive)
- <http://www.computerhope.com/history/1996.htm>
- <http://www.thecloudinographic.com/2011/11/10/cloud-computing-past-present-and-future.html>
- <http://en.wikipedia.org/wiki/Google>
- <http://www.computerhope.com/history/1998.htm>
- <http://www.vmware.com/virtualization/history.html>
- [http://en.wikipedia.org/wiki/Millennium\\_bug](http://en.wikipedia.org/wiki/Millennium_bug)
- <http://www.computerhope.com/history/2000.htm>
- [http://www.msnbc.msn.com/id/20534080/ns/technology\\_and\\_science-security/v-worst-computer-viruses-last-years/#7yr-8v4nM](http://www.msnbc.msn.com/id/20534080/ns/technology_and_science-security/v-worst-computer-viruses-last-years/#7yr-8v4nM)
- [http://en.wikipedia.org/wiki/Reiser\\_FS](http://en.wikipedia.org/wiki/Reiser_FS)
- [http://en.wikipedia.org/wiki/Perpendicular\\_recording](http://en.wikipedia.org/wiki/Perpendicular_recording)
- <http://en.wikipedia.org/wiki/YouTube>
- <http://pctimeline.info/comp2008.htm>
- [http://en.wikipedia.org/wiki/Solid-state\\_drive](http://en.wikipedia.org/wiki/Solid-state_drive)
- <http://blogs.cisco.com/tag/data-center/page/7/>
- [http://en.wikipedia.org/wiki/Tablet\\_computer](http://en.wikipedia.org/wiki/Tablet_computer)
- <http://www.census.gov/pulation/international/data/db/worldpoptotal.php>
- [http://www.stforecasts.com/products/ES\\_pcwv1203.htm](http://www.stforecasts.com/products/ES_pcwv1203.htm)
- <http://hadoop-karma.blogspot.com/2010/03/how-much-data-is-generated-on-internet.html>