

# CA rebuilds reputation on firm IT footing



by Arif Mohamed

CA Technologies is one of the world's largest independent software companies with revenues of \$4.4bn (£2.7bn). The IT infrastructure supplier specialises in software products that help users manage their mainframes and distributed computing environments. But CA is no one-trick pony. It also sells desktop PC anti-virus, project and portfolio management tools, storage software, eco-computing packages, and virtualisation technologies.

Through its long history, the company has weathered many storms, the worst of them occurring in the last decade. These include insider-trading allegations, Department of Justice constraints on acquisitions, court battles over its accounting methods, a bitter fight between the board and the shareholders, criticism about heavy-handedness with customers, and complaints about executive nepotism, and the jailing of its chief executive.

Yet CA Technologies ended 2010 in a very healthy position, with a massive installed base of mainframe and enterprise customers and a reputation for innovative technologies.

CA's CEO, William E McCracken, who took over from John Swainson in January 2010, sums up his strategy succinctly. "We are nurturing our core business by managing expenses, focusing on performance and execution, and sustaining the competitive advantages that our mainframe and distributed system portfolios enjoy. At the same time, we are investing in the high-growth areas of virtualisation management and cloud computing," he says.

The company has been significantly acquisitive over the past few years, under both Swainson and McCracken. It has built up its technology portfolio, acquiring software to monitor performance and availability of IT systems, manage network performance, and develop its cloud computing capacity.

The bulk of the company's products focus on the nuts and bolts of IT management. It has divided its products into eight groups:

- cloud computing
- automation
- virtualisation
- service management (which enables IT departments to offer IT as a service to the enterprise)
- service assurance (which monitors the health of applications)
- project and portfolio management
- energy and sustainability management
- mainframe security and compliance.

## Escaping the past

CA was founded in 1976 by Charles Wang, a charismatic but dominant figure in the company for almost 30 years, who espoused a family-oriented management style. Wang launched Computer Associates at the age of 31, using credit cards for funding, and remained with the company until 2002.

He is known for his philanthropic projects. However, under his leadership, the company also gained a reputation for accounting irregularities, poor customer service and offering its executives unacceptably high compensation.

Over the years, Wang alienated some by placing family members in key positions, for example making his older brother Tony president and chief operating officer in 1979, and his second wife Nancy Li chief technology officer in 1998.

Nevertheless, Wang's single-mindedness enabled him to build a strong business. He engineered around 50 takeovers, frequently firing top management and key employees of the acquired companies. In 1998, Wang famously initiated a \$9bn hostile offer for the shares of Computer Sciences Corporation (CSC) before controversially dropping the plan.

## Revenues (US \$)



Source: CA Technologies

## Overview

Founded in 1976, Computer Associates, now CA Technologies, is one of the world's largest independent software companies. Headquartered in New York, the company specialises in IT management software for mainframe and distributed IT systems. Its diverse portfolio also includes antivirus and Internet security, project and portfolio management, and green computing software.

CA posted revenues of \$4.4bn (£2.7bn) for 2010, and has 150 offices in more than 45 countries. Its software is used by most Forbes global 2000 companies. The company employs 13,200 people, including 5,900 engineers. Over 12 months from the end of 2009 it acquired eight companies to support its cloud strategy. It intends to maintain simultaneous support for mainframe and distributed/cloud computing users.

The company has successfully recreated itself to leave behind former financial and competition scandals which resulted in one of its chief executives serving a prison sentence for his role in accounting fraud. With a renewed focus on both its customers and R&D, CA aims to lead the way in emerging technologies such as cloud, virtualisation and software-as-a-service.

The end of the road came for Wang in 2000, when a class-action lawsuit accused him, the president at the time, Sanjay Kumar, and co-founder Russell Artzt of wrongly reporting more than \$2.5bn in revenue between 1997 and 2000, to artificially inflate the stock price for personal gain.

The three executives received nearly \$1bn in Computer Associates stock in total, with Wang himself receiving \$700m. He had already been one of the highest-paid CEOs in the US for the preceding four years. Wang returned a portion of the stock award, but resigned as CEO in 2000, yielding his position as chairman of the board in 2002.

Kumar took over as CEO in 2000, but resigned in April 2004 following an investigation into the accounting scandal. A federal grand jury indicted Kumar on fraud charges in September 2004, and he pleaded guilty to obstruction of justice and securities fraud charges in April 2006. Before sentencing, Kumar said, "I stand before your honour today to take full responsibility for my actions. I know that I was wrong and there's no excuse for my conduct." He was sentenced to 12 years in prison and fined \$8m for his role in accounting fraud at Computer Associates.

Nevertheless, Kumar is recognised for moving CA to being a more customer-focused organisation, introducing a system of 'customer advocates' in the business, and creating more flexibly-priced customer contracts. The contract programme was termed the "ratable revenue recognition business model" and helped to cushion the cost of a CA software installation over time, a move welcomed by the user community.

Nigel Stanley, practice leader IT security, at Bloor Research, says that the company has worked hard to reinvent itself as a supplier of enterprise IT management (EITM) software. He describes today's CA as having knowledgeable technical employees who are willing to talk to customers intelligently about mainframe integration, web technologies, and security. "But I do wonder if they lost some of their energy [around 2000]. It takes a lot of leadership stamina to drive through the changes that the company needs," says Stanley.

Will Cappelli, research vice-president at Gartner, says that CA is now a completely different organisation. "There lingers among some of the people I talk to a memory of the old CA and, to be sure, the company hasn't gone soft. They're not the most flexible or forgiving of vendors, but the almost hostile approach to customers and the less transparent behaviours seem to be a thing of the past."

Tim Bisley, vice-president UK and Ireland at CA Technologies, is reluctant to be drawn into a conversation about CA's past misadventures. He joined CA in July 2010, and was previously vice-president, corporate sales EMEA at IT service management software supplier Mercury Interactive, now part of HP, before which he held positions at HP Software, McAfee and Nimsoft.

Bisley says, "I wasn't around and can't comment on [former executives] but I think all great companies move forward and technology is organic. The leadership we see today is a mixture of some long-standing CA executives and some guys like myself and others from different backgrounds. We have come from some very successful software companies. We know how to execute our strategy."

## CA customers

Arsenal Football Club  
Avis-Europe  
Baker Tilly  
Barclays  
BASF It Services  
BMW  
BT  
Centris  
Citi  
Computercenter Germany  
Continental Airlines  
Danfoss  
Debenhams  
Easynet  
El Al  
Fidelity National Information Services  
Fife Council  
Grant Thornton  
Hitachi  
Home Hardware  
Hugo Boss  
ING  
Logicalis  
Manpower  
Sainsbury's  
Standard Life  
Tesco  
TNT  
Tourism Ireland  
Turkish Aerospace Industries  
University Of New South Wales  
Visa Europe

Source: CA

## CA's green IT policies

CA is attempting to lead the way in sustainable computing, and has developed several energy management tools that bring together data collection, data monitoring and reporting, and governance. Competitor products come from SAP and Hara, which both have software tools to track carbon emissions.

"This is a critical area for us," says Tim Bisley, vice-president UK and Ireland at CA Technologies. "People quite often quote regulations as being the driver behind companies adopting sustainable computing, but in reality it is about cost containment. In a typical datacentre 17% of the cost is power, so accurately monitoring and managing consumption is becoming increasingly important."

CA has only been operating in the eco-software market since October 2009. However, it has already won retail giant Tesco over with its software.

Tesco is using CA's ecoSoftware suite, which features metering and governance tools, to reduce carbon emissions across its global operations. Tesco has more than 4,000

locations across 14 countries, so the task of accounting for carbon emissions is time-consuming and complex.

However, the retailer plans to halve emissions from existing buildings by 2020, halve distribution emissions of each case of goods delivered by 2012, and halve emissions from new stores by 2020.

Paul van Heyingen, climate change manager at Tesco, says, "In the past we have used ordinary spreadsheets to do this work and calculate Tesco's overall carbon footprint, but always worried about the data quality, and also keeping the data private."

"We treat reporting carbon as we do our financial information. We get it audited privately before we release it," adds Simon Palinkas, head of Tesco's Green IT Group. According to Tesco's IT team the strengths of CA ecoSoftware are that it is automated, interactive, global and multi-language, and therefore allows Tesco personnel to input their data from multiple locations around the world.

**Customer Perspectives**

Customers are happy with the new CA, says Cappelli. “We have testimonial after testimonial saying that dealing with CA is different from before, and we see it too as analysts, in the nature of the interactions. They are becoming much more of a ‘formal’ software company, where in the past they were a financial operation.”

Mainframe-related software generates around 50% of CA’s revenues. Bisley says that mainframe customers, which include the larger and more “prestigious” corporations, are particularly important to the supplier.

“Mainframe is a growing market so we have to maintain that growth and look after our mainframe customers and remain loyal to them. We also want to be seen as that agile company we know we are, and a 21st-Century company,” he says.

The supplier, for example, announced new mainframe management software, CA Mainframe Chorus, and CA Mainframe Chorus for DB2 Database Management. The software is designed to simplify daily management tasks, help to control mainframe costs, and offer administrators a modern interface and tools.

Cappelli says that CA has done well to capitalise on the resurgence of the mainframe over the past decade as IBM released lower-priced and more efficient mainframe servers, while actively targeting the customers of rival software suppliers.

“The mainframe market has its own dynamic, with a few large suppliers such as IBM, SAP, ASG and CA, plus the smaller players. Although the innovations and marketing hype in the distributed world impact the mainframe world, to a certain degree these two are largely independent from one another,” he says.

CA, as well as competing on price with IBM, has differentiated itself by pursuing a strategy of integrating the mainframe with distributed computing systems, using software platforms such as the Wily application performance management suite.

“In comparison, BMC has pursued a different strategy, with some specialisation on the mainframe. BMC has not done that much to link their mainframe with distributed systems and have gone for more of a best-of-breed approach: an equally valid strategy but different from CA,” says Cappelli.

**Future technologies**

CA remains dedicated to its mainframe customers. However, McCracken’s first strategy steps have been to focus on newer technologies such as cloud computing, virtualisation management and SaaS. The company continues to grow and enter new markets through acquisition. It has bought several cloud, virtualisation and SaaS specialists to strengthen its portfolio in these areas.

**Case study: Baker Tilly**

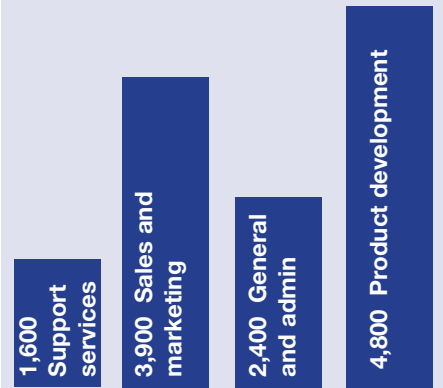
Accountancy services firm Baker Tilly has been using CA’s software applications for about a decade, says David Hilland, Baker Tilly’s deputy director of IT. Under new management, CA has become more customer-friendly, he says. In fact, Baker Tilly says it has a very close relationship with the supplier, particularly with its software engineers.

The accountancy firm has been an active user of CA IT Client Manager (ITCM) for eight years, as well as CA Service Desk. Daniel Russell, senior infrastructure engineer at Baker Tilly, describes the relationship as mutually beneficial, because Baker Tilly has been able to feed back issues with the products that CA has then been able to fix for the benefit of other users.

For example, Baker Tilly carried out a large-scale Windows 7 migration in March 2010, as an early adopter of the operating system, working closely with Microsoft, Dell and CA. It used CA’s software to automatically test and roll the software out across its desktop estate. During the programme, Baker Tilly was able to provide CA with vital information about rolling out and updating Windows 7, because it was operating a live business environment.

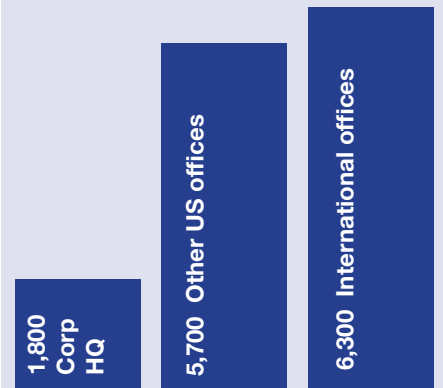
Hilland says that in one Windows 7 deployment “we enabled CA to do something they hadn’t previously been able to do, and also shortened our original deployment from four weeks to two-and-a-half, which was a massive achievement for us and very helpful to them”.

**Employees by business division (31 March 2010) – total 13,800**



Source: CA Technologies

**Employees by location (31 March 2010) – total 13,800**



Source: CA Technologies

**Key facts**

**Revenues:** \$4.4bn, 29% operating margin, and cash flow from operations of \$1.4bn 2010.

**Specialisms:** cloud, automation and virtualisation, service management and assurance, project and portfolio management, energy and sustainability management, mainframe, security and compliance.

**Employees:** 13,800 including 5,900 engineers.

**Customers:** CA claims its software is used by most of the Forbes global 2000 companies.

**Operations:** 150 offices in more than 45 countries.

**History:** CA was founded in 1976 by Charles Wang, he remained with the company until 2002 when Sanjay Kumar took over as CEO. Now headed by Bill McCracken, who became CEO in January 2010, the company is focusing on emerging technologies such as cloud computing and virtualisation, while continuing to support its large installed base of mainframe users.



CA acquired NetQoS, which strengthened its management capabilities for networks, systems, application performance and cloud at the end of 2009. Also in 2009, it bought the technology assets and key personnel of utility computing management software firm Cassatt, and service level management software supplier Oblicore, in January 2010, both of which boost CA's cloud services. CA also purchased Nimsoft, which provides monitoring tools for managed service providers, including cloud service providers.

Next it acquired cloud computing management software specialist 3Tera, saying it plans to extend the supplier's virtualisation support beyond the Xen virtualisation platform, to include the leading virtualisation environments VMware ESX and Microsoft HyperV. And, in November 2010, the acquisition of Hyperformix helped CA to plug the gap in 'capacity management' in a virtualised environment.

Cappelli says, "From their strategic positioning, CA Technologies believes it can establish itself as the leading provider of cloud technology, and is getting everything in order, through acquisition, to successfully deliver a cloud-enablement platform, complete with management and security."

"We saw that cloud was a buzzword really early and our acquisition strategy strengthened what we already had," says Bisley. "We can be a market leader in managing and securing the cloud. Cloud is a delivery model for IT, and I would argue, being an old mainframe person, that there are definitely some benefits of moving to cloud, for example the promise of agility. IT departments have potentially fewer resources going forward, and we are going to help our customers to exploit cloud and SaaS [and lower their IT costs]."

One way in which CA is helping its customers to exploit the cloud is to develop standard ways of benchmark their existing IT services against the cloud, says Bisley. CA is working with Carnegie Mellon University to compare and benchmark internal and external IT systems, and investigate issues such as service orchestration across hybrid environments, cloud security and user authentication. CA's research and performance benchmarks will be particularly helpful to CIOs deciding whether or not to pursue cloud computing.

Cappelli warns that cloud has the aura of "fashion and hype" so "a supplier like CA has to be careful to hedge its bets". He predicts that 2011 will be the year that CA builds up its SaaS portfolio through acquisitions, perhaps in service desk and application performance monitoring, an area in which all the larger suppliers are trying to experiment.

However cloud computing and SaaS develop over the course of time, CA's strategy is to jump in early and build up the component parts so it can compete against the likes of Oracle, Microsoft, BMC, IBM Tivoli and HP in the long-term, says Cappelli.

### Integrating component parts

Looking across CA Technologies' product portfolio, it becomes clear that CA has many component parts. CA's core suites centre on managing and securing IT services and applications across physical, virtual, on-premise and cloud environments. They follow in the footsteps of Computer Associates' Unicenter TNG (The Next Generation) management suite from the 1990s.

But CA also sells desktop antivirus (CA Anti-Virus), project and portfolio management (CA Clarity), storage management, and environmental compliance software applications (CA ecoSoftware).

Colin Bannister, CA's CTO for UK & Ireland, says the company is determined to continue investing in "organic R&D" – by which he means focussing R&D on the technology products that customers choose to adopt – as well as acquiring best-of-breed technology firms and assets. But he adds that the company's biggest desire is to integrate these products together, as well as linking in third-party systems. It plans to do this through a service-oriented integration platform called Catalyst, which is under development.

In many ways, the strategy echoes Oracle's, which is launching an integrated middleware platform, Oracle Fusion Applications, for the enterprise applications it has acquired over the past six years.

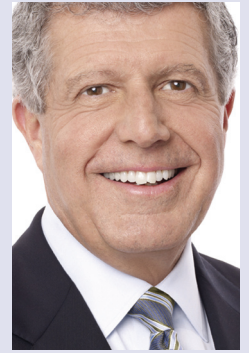
Bannister says, "From our customers' perspective, the challenge they face to be agile comes down to process rather than technology itself. IT processes cross multiple boundaries, and our service automation strategy can help here. It's all about how they standardise their IT infrastructure and then how they automate it."

However, CA's desire to integrate its diverse range of applications, as well as mainframe and distributed architectures, is not necessarily healthy, says Cappelli. "CA is obsessed with integrating its portfolio through the use of management technologies, and has been

### CA Technologies Executives

#### CEO William E McCracken

McCracken joined CA Technologies' board of directors in 2005, and held the roles of both non-executive and executive chairman from 2007 to 2010. He became CEO in January 2010. Before he joined CA, he held numerous executive positions at IBM where he worked for 36 years.



#### Executive vice-president technology and development group, Ajei S Gopal

Gopal is responsible for the development of CA's broad portfolio of products and solutions for the mainframe, distributed and cloud computing environments. He oversees a global community of about 4,000 developers and engineers.

#### Executive vice-president, CFO Nancy E Cooper

Cooper is responsible for all of CA corporate and business unit financial functions worldwide, including the controller role, treasury, tax, investor relations, and risk management. She joined CA in August 2006 and has nearly 30 years of finance experience.

#### Executive vice-president, risk & chief administrative officer Phillip J Harrington Junior

Harrington is responsible for HR, education, administrative services, risk management, information services and government relations operations globally. He has worked at Deloitte & Touche and Prudential Financial.

#### Executive vice-president and group executive customer solutions group David Dobson

Dobson manages the company's mainframe, distributed and cloud computing products. He is also a member of the company's executive management team.

#### Executive vice-president worldwide sales and operations George Fischer

Fischer is responsible for revenue, profit and customer satisfaction in the 150 countries in which CA does business.

### CA Technologies UK Executives

#### Vice-president UK and general manager UK and Ireland, Tim Bisley

In July 2010, Bisley was appointed to oversee CA's operations across the UK and Ireland. He was previously responsible for the launch of the supplier's mid-market associate account manager programme, a role he held since April. Bisley formerly held management positions at McAfee, HP Software and Nimsoft.

since the early 1990s. While they argue that integration is of value for the customers, the truth is it's not really a big issue for customers."

In fact, the integration strategy could lead to CA users losing out on both the brand recognition and functionality of individual products, particularly the ones that CA has acquired.

Cappelli says, "CA has a shining portfolio right now based on the acquisitions of the past four years, including leading brands such as Wily, Spectrum and in eHealth. The customers are not anywhere near as interested in integrating these products as CA and there is the further danger of covering over and muting the individual brands."

This goes for application management tools as well as the Clarity products, Spectrum and NetQS, which have strong customer loyalty, he adds. The result will be a "bland" product family that lacks innovation in the right places. "I already see that happening. When CA does its overall positioning, instead of focusing on what these individual products can do, it treats their functionality as ticks in a tick list instead of waxing lyrical about their finer points."

Cappelli adds, "To a certain degree they are doing this around cloud as well. In reality, people are buying network performance, application management, security and so on, not just generic cloud computing, but CA risks muting some very powerful messaging."

Integration aside, Cappelli says, "In some sense, CA is engaged in a competition for the management market which is more existential and profound. CA's big competition will be Oracle and Microsoft and eventually a retooled Tivoli and HP, as well as VMware and maybe SAP. The major case that CA needs to make [to its users] is its supplier-independent approach to management, compared with Oracle and Microsoft's [single-stack approach]."

Whatever the competitive landscape looks like in the future, Bisley argues that CA is now operating at the cutting-edge of IT, and has left the past behind. "Over the past 10 years CA has built on its prestigious mainframe customer base with new management and optimisation tools, but we have also been able to look at ourselves deeply, and ask, what do we want to be as a software company? Do we want to live off our mainframe business? At the end of the day that produces a lot of cash for the business. But we are not happy with just that, and have [instead] become the agile player. Ten years ago I saw CA as a mainframe software company that wasn't exciting. Now I see it as the opposite."

Computer Associates has successfully recreated itself as CA Technologies, and left its chequered past behind, while building on the strengths of both its customer base and technology portfolio. CA's strategic purchasing of specialist companies will help it to lead the way in the emerging cloud and SaaS market, and its loyalty to its mainframe base will help users to extend their systems while protecting mainframe revenues.

With an impressive customer list that includes leading retailers such as Tesco, and financial services firms including Barclays, the new CA Technologies is worth considering for IT service management and automation, as well as cloud, virtualisation and SaaS. ■

#### CA Technologies UK Offices

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#### Acquisitions

##### September 2010

(in process) Hyperformix (cloud capacity management)

##### September 2010

Arcot (cloud authentication security)

##### August 2010

4Base Technology (virtualisation and cloud consulting)

##### March 2010

Nimsoft (cloud performance monitoring)

##### March 2010

3Tera (cloud deployment)

##### January 2010

Oblicore (service level management software)

##### November 2009

NetQoS (network performance management)

**June 2009** Cassatt (utility computing management)

##### October 2008

Optinuity (IT process automation management)

## Case study: Barclays

Barclays had focused on improving the monitoring of its 70 core applications following a change of senior management in 2007.

They run on hundreds of IBM AIX Unix-based servers under Websphere, IBM's application architecture, and are managed with IBM's Tivoli application suite.

Barclays' 70 applications cover internal banking and external internet banking systems that support millions of customers. Between 2002 and 2006 Barclays rapidly expanded its middleware and, in 2005, introduced an application monitoring system called Wily Introscope 5.0 at the same time as it implemented a critical cheque-processing system.

Wily was subsequently bought by CA in 2006. Dave Richards, application performance engineer at Barclays, says the supplier has maintained and improved the software, which

helps Barclays to target problem applications and fix them within a day. CA Wily gives Barclays a dashboard overview of all 70 applications, showing a red, amber or green status to indicate the health of each one. Barclays uses this to monitor its applications around the clock from datacentres in Northampton, Canary Wharf, Madrid (Spain) and Poona (India) with South Africa next on the list.

Using CA Wily, Barclays can demonstrate to the relevant application supplier where the problem is, so they can be corrected quickly. "With Wily, we have noticed issues even before the customer has been affected," says Richards.

In 2006, when Barclays went live with Wily across its entire IT estate, it worked with CA Wily Professional Services on-site for six months to help install and integrate the software and train its IT staff. "I would thoroughly recommend this approach," says Richards.

# CA history



## October 2009

CA launches its energy and sustainability software suite, ecoSoftware.

## November 2009

CA acquires NetQoS (network performance management) to strengthen its cloud strategy. In June it also buys Cassatt (utility computing management).

## January 2009

Richard Sulpizio, former president and COO of Qualcomm, is elected to CA's board of directors. Chief executive John Swainson retires and Bill McCracken takes over, first as an interim move, then formally, from January 2010.

## 2008

- CA releases an integrated suite of Enterprise IT Management software packages, which use virtualisation. It also launches Mainframe 2.0, an initiative to change the way the mainframe is managed.
- CA has one of the strongest IT portfolios in its history covering infrastructure management, IT governance, service management, datacentre automation and security management for both the mainframe and distributed environments.
- CA plans to expand its India Technology Center (ITC) in Hyderabad into a \$30m R&D building to accommodate anticipated growth in its R&D, technical support, IT infrastructure management, applications development and professional services teams.

## 2007

- CA establishes a mainframe business unit, and officially opens its state-of-the-art India Technology Center in Hyderabad, India.
- Michael J Christenson is named as CA's president, in addition to his role as COO, and Bill McCracken succeeds Lewis Ranieri as chairman of CA's Board.

## 2006

- CA continues to pursue its enterprise IT

management strategy and acquires XOsoft (application protection and recovery), Wily, a leader in the application performance management market, and Cybermation, whose technology is a key component of CA's workload automation offering.

- Ex-CEO Sanjay Kumar pleads guilty to obstruction of justice and securities fraud charges, and is jailed for 12 years and fined \$8m.

- The company officially changes its name to CA Inc and makes a number of changes to its executive management team.

## 2005

- CA announces its new enterprise IT management (EITM) vision, to unify and simplify the management of enterprise-wide IT.
- CA has the largest product release bonanza in its history, debuting 26 new versions and more than 85 products under its EITM programme.
- The company unveils a new logo brand with the tagline "Believe Again".

## 2004

- CA bolsters its board of directors and management team, naming Lewis S Ranieri chairman of the board, and Kenneth D Cron, former Vivendi Universal chairman and CEO, as interim CEO.
- CA pursues its strategy to enable customers to run their IT operations like a business.

## April 2004

- Sanjay Kumar resigns as CEO, following an investigation into accounting irregularities.
- CA names John Swainson, a 26-year industry veteran, president and CEO-elect.

## 2003

CA debuts Security Command Center, an application that enables users to proactively manage security from one central point.

## 2002

- CA introduces the first set of management

and security solutions for Unix.

- Charles Wang yields his position as chairman of the board.

## 2001

- CA introduces one of the first multi-platform enterprise portal that features multiple personalised workplaces. Today, the portal software is sold as part of the Clever Path family of products.
- Sanjay Kumar introduces more flexible licensing contracts and customer advocates.

## 1998

CA extends Unicenter for the web environment and becomes the first company to partner with both Netscape and Microsoft at the same time.

## 1996

CA acquires Cheyenne Software, strengthening its enterprise storage suite, which are sold today under the Bright Stor family of products.

## 1995

- CA expands to the Far East, Africa and Latin America. It debuts a full line of products for Windows NT.
- CA introduces Unicenter The Next Generation (TNG), an major update to its flagship suite that integrates network and systems management.

## 1993

CA becomes one of the first suppliers to deliver systems management, security and storage for open systems with the launch of Unicenter for Unix.

## 1989

CA reaches \$1bn in revenues.

## 1985

CA introduces Unicenter, its flagship systems management software suite.

## 1984

CA sells its first relational database management and application system, now part of the Advantage family.

## 1983

CA introduces its first enterprise security management solution, now marketed under eTrust.

## 1978

CA enters the enterprise storage management market with Dynam-T.

## 1976

- Russ Artzt, Charles B Wang and a few others found New York-based Computer Associates International Inc, using credit cards for its initial funding.
- CA introduces its first product, CA-Sort, which delivers full-function sort, merge and copy capabilities for the IBM OS/390 mainframe market. The company makes \$5m in revenues the next year.