

SOFT FOCUS ¾ COMPUTER VIRUS PREVALENCE STATUS IN

MAINLAND CHINA

To solicit information about the computer virus prevalence status in mainland China, the National Computer Virus Emergency Response Center (NCVERC) and the Anti-virus Products Testing and Certification Center conducted a survey during April-May 2001. This survey served as a basis for the National Computer Network and Information Security Administration Office and the Police Public Information Network Security Supervision Bureau to stimulate virus detection and disinfection strategy. It also helped to raise the information security awareness of the whole society and improve enterprises' ability to protect their computer systems against virus attacks.

The scope of study covered virus types, infection rate, means of propagation and anti-virus work in the country. About 6,000 computer users participated in the survey which was conducted through the web sites of NCVERC and the Anti-virus Products Testing and Certification Center.

Key survey findings

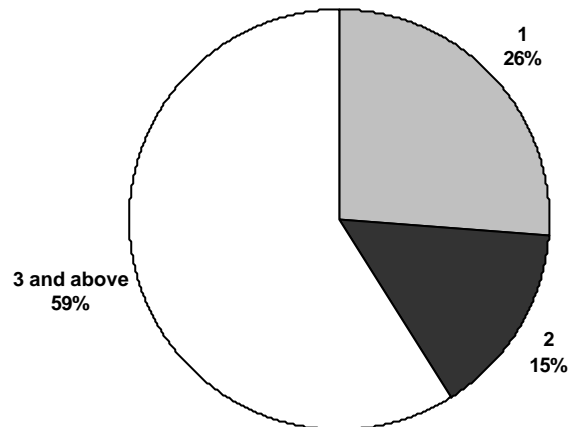
Virus infection

Survey results indicated that 73% of the responding companies had been attacked by computer viruses. Nearly three-fifths of the infected users (59%) expressed that they had encountered at least three times of virus infection (see figure 1). These findings highlighted that both the virus infection rate and repeated infection are high in mainland China. Mainland computer users need to improve their anti-virus effort in order to safeguard their systems from future infection.

Damages

When asking respondents the damage level from the virus attacks, 14% said that they had lost all the data after the virus outbreak while 29% lost part of the data (see figure 2). In contrast, 57% did not record any damages. Nevertheless, the financial impact from computer viruses should not be overlooked as viruses are getting more complex and widespread in a network environment.

Figure 1. Times of virus infection



Source: NCVERC, 2001

Figure 2. Damages caused by computer viruses

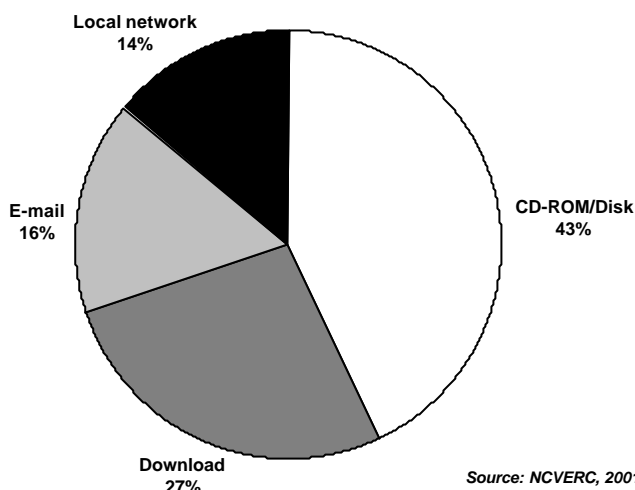


Source: NCVERC, 2001

Means of propagation

In mainland China, viruses were mainly spread through CD-ROM/Disk (43%) (see figure 3). Also, a remarkable percentage of virus infection was through download (27%) or e-mail (16%). In view of the growing popularity of the Internet and e-mail, enterprises have to deploy security measures for both the traditional and new media in order to prevent virus infection.

Figure 3. Means of propagation



Top 10 prevalent virus in the Mainland

Table 1 lists the top 10 prevalent viruses in mainland China, U.S. and Britain. The dominant types of virus differ among different countries largely due to the differences in economic conditions and technological developments. CIH, Funlove and Binghe were found to be the three most common viruses in the Mainland as of May 2001.

Table 1. Top 10 prevalent viruses

	Mainland China	U.S.	Britain
1	CIH	VBS.VBSWG-X	VBS.VBSWG-X
2	Funlove	Magistr	Magistr
3	Binghe	VBS.VBSWG-Z	Hybris
4	W97M.marker	Funlove	Badtrans
5	MTX	Hybris	Apology
6	Troj.erase	Badtrans	VBS.KakWorm
7	BO	VBS.LoveLetter	VBS.VBSWG-Z
8	YAI	MTX	W97M.market
9	Wyx	KakWorm	Bymer
10	Troj.gdoor	VBS.Happytime	Funlove

(Sources: NCVERC in mainland China, Securityportal in U.S. and SOPHOS in Britain as of May 2001).

In August and September, the viruses CodeRed II and Nimda were widely spread in the Mainland. NCVERC received more than 1,000 incidents for the former and over 5,000 incidents for the latter, arousing nationwide concern for information security.

Improving anti-virus work in mainland China

NCVERC plans to establish an anti-virus study lab with some global anti-virus companies. In addition, it actively exchanges and cooperates with international computer emergency organizations to promote anti-virus work and provide improved security services to computer users. Currently, the anti-virus effort focuses on three major areas:

User education

Many computer users in mainland China have only basic knowledge of computers and networks and their concern for information security is low in general. Hence user education is very important and it is necessary to provide a variety of security training to address the needs of different users.

Virus alert

As many computer users do not know much about computer virus nor the methods to deal with it, NCVERC publishes virus alert and disseminate this information to users via TV, press, e-mail and the Internet. The objective is to advise users to block the virus and guard their computer systems.

Virus tracking

Enterprises should have anti-virus software in place in order to find the virus immediately and control its distribution. They should report the virus information to NCVERC so that it can inform other computer users to guard the virus in time and minimize the financial losses. Tracking the source of virus is also critical to protect the computer systems from being attacked again.

SPOTLIGHT***Balancing content management - Hong Kong-based Oboweb helps business build and maintain Web sites with its content management system.***

Since many Web sites have sprung up in cyberspace, Web content management (WCM) has become one of the top IT priorities that enterprises are looking at to manage and distribute content efficiently and cost-effectively to their employees, customers and business partners. Research firm Ovum projects that the worldwide WCM market will grow from US\$970 million in 2000 to US\$5.34 billion in 2004. It also forecasts that 75% of Fortune 2000 companies will adopt WCM solutions between 2001 and 2003.

To leverage the market ushered in by the Internet, Oboweb was founded in Hong Kong in 1997, using its Web-centric technology to improve the construction, maintenance and deployment cycle of Web sites and Intranets.

Its flagship product, the Distributed Content Management (DCM) system, helps companies to accumulate, organise, manipulate and present content continuously and securely.

“It’s a 100% Java application and runs on Web browser clients. Enterprises can continuously update fresh content as fast as they need and deliver it across the Internet,” said Victor Lee, CEO, Oboweb.

In the past, large enterprises can use two approaches to establish their Web sites. The decentralised approach allocates a budget to each subsidiary to build its own site whereas the centralised approach constructs a megaportal for all the subsidiaries. Each option has its drawbacks.

The DCM system keeps an equilibrium between the two approaches and provides enterprises with the centralised control and distributed process of content update.

DCM also supports and regulates the workflow of the enterprises. To minimise human errors and improve content quality, the workflow module provides necessary approval processing functions before the content is published so that the companies can have better control on content quality and keep track of changes at all times.

This article was also published in the Asia Computer Weekly on November 12, 2001.

SOFT NEWS

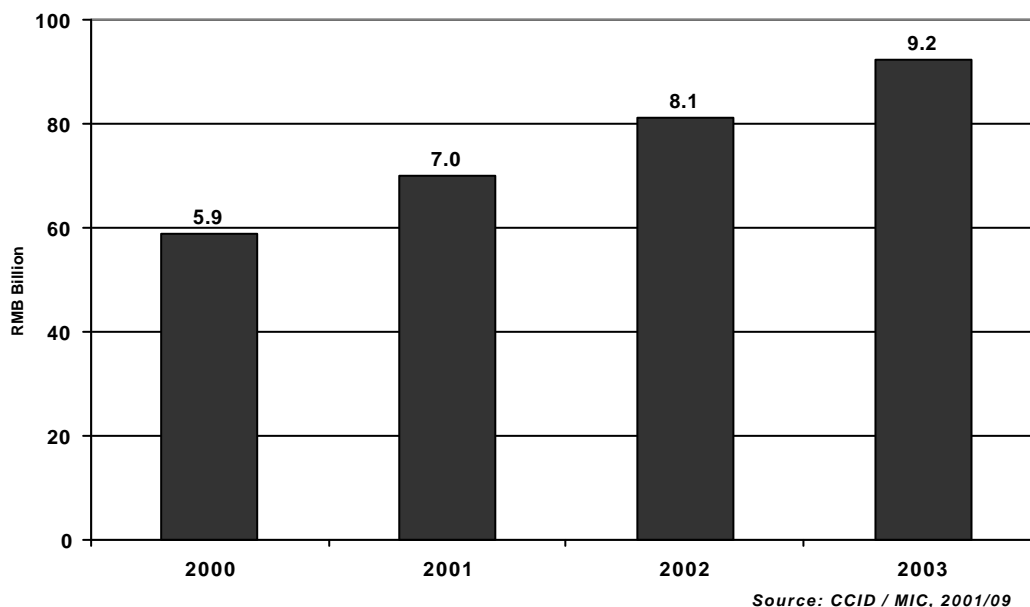
Enterprise application market in mainland China

CCID forecasts that the enterprise application market in mainland China will grow from RMB 5.9 billion in 2000 to RMB 9.2 billion in 2003, at a compound annual growth rate of 16.2% (see figure 4). Industry-specific applications (61%) accounted for the largest share in 2000, followed by financial/accounting software (24.7%).

Key market trends sharing its future development are:

- Internet will become the mainstream platform for enterprise applications and virtual enterprises will grow in popularity.
- The application service provider model will gain momentum in the Mainland.
- Service demand for enterprise applications will grow in importance, especially in the areas of system implementation, consulting and education/training.
- Localization of product and service will be the critical success factors for enterprise applications.

Figure 4. Enterprise application market in mainland China



(MIC – Software Jnl., 2001/10/01).

Top 10 software and services suppliers

According to the 19th annual ranking of the world's largest software and services suppliers by Software Magazine, IBM, Microsoft and PricewaterhouseCoopers have secured the top three positions in 2001 (see table 2). In terms of revenue growth, Oracle (15.2%), PricewaterhouseCoopers (15%) and Hewlett-Packard (14.2%) show the highest increments.

Table 2. Top 10 software and services suppliers

Company	Software and services revenue (US\$ M)	Revenue growth
IBM Corp.	\$45,750	2.0%
Microsoft Corp.	\$23,845	9.1%
PricewaterhouseCoopers	\$21,500	15.0%
EDS	\$19,227	2.6%
Oracle Corp.	\$10,745	15.2%
Hewlett-Packard Co.	\$10,397	14.2%
Accenture	\$10,276	9.7%
Cap Gemini Ernst & Young	\$8,064	10.4%
Compaq Computer Corp.	\$7,352	2.1%
Unisys Corp.	\$5,843	-10.0%

(Softwaremag.com, 2001/07/19).

Creating cost-effective ads in electronic publications

Here are some tips to raise the cost-effectiveness of electronic ads:

- ◆ Locate electronic publications that are specific to your industry.
- ◆ Understand the number of subscribers on the circulation list.
- ◆ Find out what companies are advertising in the publications.
- ◆ Count downloads, not insertions.
- ◆ Negotiate ad rates based on results.
- ◆ Go for the first ad in the publications.
- ◆ Track the coming-in leads systematically.

(Software Success, 2001/09/03).

[HYPERLINK](#)**SIIC Library Resources****Mainland China****Mainland IT budgets keep growing** (ComputerWorld, 2001/10, p.6)

IDC forecasts that the IT spending in mainland China will reach US\$20 billion in 2001, increased by 24% when compared with the figure in 2000. Moreover, almost 30% of all companies in the Asia/Pacific region are allocating some of their IT budget toward Internet initiatives. Other key investment areas include knowledge management, supply chain management and business intelligence.

Development trends of the enterprise application software market in mainland China (MIC – Software Jnl., 2001/10, p.2)

CCID reviewed that the market size of enterprise application software in mainland China was RMB5.87 billion in 2000, with an increment of 22.3% from 1999. Due to the economic downturn in recent years, it is expected that the CAGR will drop to 16.2% for the period of 2000 to 2003. This article also analyses the future development trends of application software, technology and the market as a whole.

Japan**Analysis on Japanese enterprise e-learning market** (MIC – E-Commerce Jnl., 2001/10, p.21)

According to industrial statistics, the market size of Japanese enterprise e-learning was worth ¥13 billion in 2000 and is expected to reach ¥210 billion by 2005, with a CAGR of 74.4%. The major topics discussed in the article include computer knowledge, language and business related courses.

Analysis on the e-Japan strategy (MIC – Software Jnl., 2001/10, p.17)

The e-Japan strategy aims to develop Japan into the world's most advanced IT nation within 5 years. Objectives include: 1) enabling everyone to enjoy the benefits of IT; 2) strengthening industrial competitiveness; 3) realizing affluent national life and creative community with vitality and 4) contributing to the formation of an advanced information and telecom network society on a global scale.

ASP**ASP consortium sets up shop in SAR** (ComputerWorld, 2001/10, p.4)

The Hong Kong Application Service Provider Industry Consortium was inaugurated in October 2001, aiming to facilitate communications and collaborations among local companies within the industry and to promote the development of the ASP industry in Hong Kong. According to IDC, the ASP services market in Great China will grow at a CAGR of 205% between 1999 and 2004.

Hong Kong urges SMEs to go ASP (ACW, 2001/10, Vol. 22, No. 38, p. 9)

The Hong Kong government has urged small and medium-sized enterprises (SMEs) to take advantage of application service providers (ASPs) to save time and money and lower the risk for IT investment. The common problems of SMEs are lack of cash and information on the IT solution availability.

NETWORKING

HYPERLINKING – SOME LEGAL ISSUES (by Johnson Stokes & Master)

Introduction

A hyperlink links one website to another, often without the knowledge of the surfer or the consent of the linked website. It is no surprise that the right to hyperlink is under attack by companies which want to control who can link to their sites and by governments which want to impose restrictions on links that point to forbidden or undesirable information.

Types of Hyperlink

Hyperlinks can be image links or hypertext links. An image link (also called an automatic link) automatically instructs the browser to download a file from another site when the user accesses a web page where the automatic link is embedded. The information from other sites is pulled in without further action on the part of the user. A hypertext link (also called a user-activated link) requires the user to actively click the mouse over the hyperlink to gain access to the information from the linked website.

There are two common types of hypertext links: the first type 'links' to pages of another site and the other type 'frames' another site. If it involves a hyperlink icon (a logo or short piece of text usually coloured and/or underlined) that brings out another web document when clicked, the user often knows that he is being brought out of the original site to a new site. However this is not always the case. Often a user may be brought to another site without his notice by what is known as a deep link. Deep linking happens when one site links to pages deep within another site (i.e. by-passing the home page), often without changing the URL shown by the browser from the URL of the original website. In other words, while the URL still shows the address of the original site, the user is in fact viewing materials from another site. It is a frequent practice among small sites that wish to build an audience by linking to content or services on a more popular site. Some linked sites do not mind the free publicity but others dislike it because it robs them of page views and potential advertising revenue, or credit for their content.

Framing

Framing allows a website to be displayed in a smaller window on another site. When a site is framed within another, its URL or domain name is not displayed. Instead, the URL from the originally accessed site is visible. The window containing the framed site is bordered by as much of the originally accessed site's branding as it chooses to display. Furthermore, users are not able to bookmark the target site, as the bookmark will save the URL of the framing site.

Copyright and Trade Mark Infringement

Hyperlinking without authorisation may give rise to various legal liabilities, namely, copyright and trade mark infringement. The first reported case of deep linking was *Shetland Times Ltd v Dr Jonathan Wills & Anor* [1997] SLT 669. In that case the Defendant made a deep-link to the Plaintiff's website by linking the Plaintiff's news headlines to its own webpage, by-passing the Plaintiff's advertisements. However the Scottish court did not deal with whether deep linking was a copyright infringing act but focused only on the issue of whether copyright subsisted in newspaper headlines. As the parties settled out of court in that case, the legal consequences of deep linking were only fully explored by the courts in subsequent cases.

Since *Shetland Times*, it was well recognised that deep linking without authorisation is copyright infringement which is subject to the usual exceptions to copyright infringement e.g. fair dealing, etc.. In August 2000, the first case in Europe accepting deep linking was held in Amsterdam. The case involved one news site that deep linked to stories on other sites of various newspapers. The court accepted that deep linking was widespread and hence, held that it was acceptable, provided there was sufficient acknowledgement. In that case, the court decided that reporting of current events by deep linking to other news sites fell within the exception to copyright infringement.

There are also not many reported cases on framing. However, in the few reported cases, it is very much recognised that framing gives rise to passing-off or trade mark infringement and copyright infringement since it could be argued that framing other's site is passing itself off as being associated with the framed site, or that the content of the framed site is the content of the original site. Trade mark infringement arises if the framed site contains trade marks not belonging to or licensed for use by the original site.

Preventive Measures

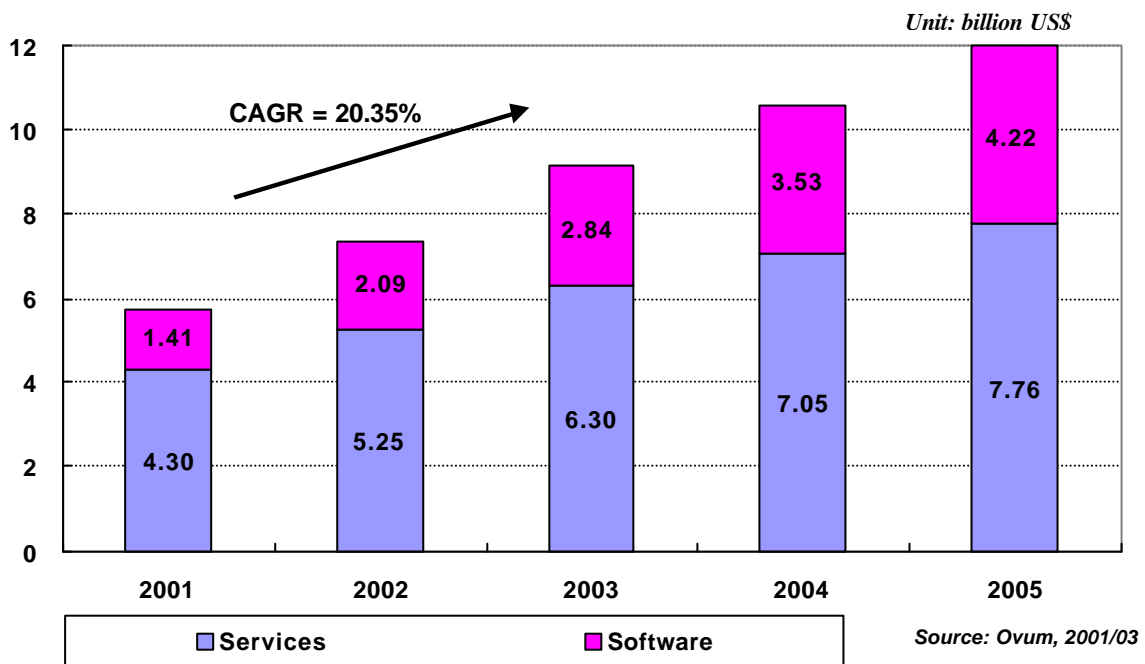
Software solutions are available to prevent hyperlinking. For example there is an application developed by a UK company called LinkGuard. The application lets websites identify what other sites are linking to them allowing users to take prompt action to remove the link.

BT has another way of tackling the problem. It recently announced that it owns a US patent which covers hyperlinking which it has possessed since 1986 but failed to exploit. BT sought patents in countries other than the US first and those have already expired. However, since the US patent office did not formally accept its application until 1986, it still has until 2006 to exploit it. It has been writing to various ISPs and websites in the US claiming royalties for using its patent. It will be interesting to see if BT will face any legal opposition if it attempts to enforce this patent.

If you would like more information in relation to the article please contact Agnes Wong on (852) 2843 2406 or e-mail: ahyw@jsm.com.hk

SOFT FIGURES

Knowledge management market size in 2001-2005



About SIIC:

The Hong Kong Software Industry Information Centre (www.siic.org.hk) was established in 1996. It is mandated to promote the business development and enhance the competitiveness of the local software industry by providing marketing support, research intelligence and partnership facilitation services.

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