Eradicating the

A PRESCRIPTION FOR

The Australian Customs Service is well advanced in preparations to combat the Year 2000 'millenium bug'. But with hundreds of millions of transactions a year between its computers and thousands of importers, exporters and other businesses, success will be very much a joint Customs–industry effort.

GRAHAM BANNISTER describes how Customs is working to ensure business as usual when its computers and other equipment need to register '1 January 2000'.

The Year 2000 problem affects most computers and most machinery with inbuilt intelligence, such as lifts, cars, fire control systems, photocopiers, VCRs, global positioning systems, mobile phones and much more. Basically, the problem arises where computers have been programmed to store dates with the years as two digits, such as '97' and would be unable to recognise '00' as '2000'.

The problem will have a significant effect on Australia - and the world - if the 'fixes' are poorly managed. As an indication of the cost to Australia's economy in preparations alone, many large Australian organisations will spend more than $100 million each to resolve the issues.

To ensure a coordinated Commonwealth government approach to the problem, the Office of Government Information Technology has taken an oversighting role. OGIT is expected to take some of the burden from individual government agencies in several ways, such as dealing with power, gas and water supply utilities; ensuring knowledge of new products and services is shared; and in helping to raise awareness in the community.

With Customs high levels of computer interaction with clients, the risks to us are very high, from within and from other organisations, some of whom we rely on heavily in carrying out our business.

'00' bug

THE YEAR 2000

For organisations like Customs, the Year 2000 problem is much more than a technical issue and will only be solved with the support and involvement of business.

Customs strategy to tackle this problem is well advanced. A full-time Year 2000 manager was appointed in March 1997 and a senior executive steering committee oversees the project.

A recent assessment by consultants Coopers & Lybrand concluded that Customs Year 2000 Project was ahead of most Commonwealth agencies that were reviewed, but somewhat behind world best practice for organisations of similar size and IT profile. The 'best practice' with which we are compared relates to banks and similar large financial institutions in the United States and Canada. Because of their credit, contractual and other financial requirements they have had to spend $100 million or more to be Year 2000 compliant now, not in two or three years time.

Customs expects to achieve similar levels of compliance well before 2000 and to spend about $5 million getting there.

Customs is establishing what needs to be done to ensure its own house is in order before beginning a program of testing how its systems interact with those of clients and other government agencies.

So far, working to a project plan with defined milestones, Customs has completed an inventory of all computer systems, applications and hardware. They have been rated in terms of how critical they are to the business of Customs and whether they should be replaced, repaired, or retired.

The list is mind-boggling. It includes a mainframe and five midrange computers, 3980 desktop PCs, 400 laptops, 127 local area network servers, 158 hubs, switches, controllers and gateways for networks, 73 routers to connect LANs, 700 printers and 350 modems. As well, there are 71 major applications, some of them very large, comprising thousands of computer programs.

The computer applications include processing international passengers arriving in Australia, calculating duty to be paid on imported goods, the licensing system for customs brokers, customs and excise entry preparation and processing, calculating and paying diesel fuel rebates, information on tariffs and valuation, and administering tariff concessions.

Another measure of the need to avoid complications or failures associated with the Year 2000 problem is the important role Customs plays as the Commonwealth's second-largest revenue gatherer. In 1996-97, Customs raised $17.5 billion in customs duty, sales tax and excise and passenger movement charges. It paid out $6.5 billion in industry assistance schemes, the Diesel Fuel Rebate Scheme, bounties and drawbacks.

An inventory is being drawn up of all Customs buildings and equipment. We do not wish to be in a position where the computers work, but staff cannot because of other equipment malfunctions.

This inventory of non-IT systems and equipment covers our exposure to possible malfunctions in lifts, security equipment, lighting, fire fighting, air conditioning, photocopiers, facsimiles, mobile phones, navigation equipment and so on.

A key feature of the plan is that each 'business area' of Customs is responsible for ensuring that any of its processes depending on technology do not malfunction because of a Year 2000 issue. This conforms with world private sector best practice and helps ensure that the people responsible are adequately involved in the process.

Customs is ahead of many other government agencies because it has completed risk assessment and analysed business impacts and developed widespread staff involvement. It also has an advantage through having to deal with similar date-related issues over the past 17 years. Consciousness of date-related issues has been relatively high since overcoming a 'change of decade' in 1980 which affected several major applications. Most of our databases store dates as a count of days from a given time and so are not susceptible to the bug. In commercial processing we do not have to record dates more than about 10 years either side of 'today', and the programming standards we have adopted over the last 15 years will substantially reduce changes. For example, in most programs a year presented as '01' can readily be identified as 2001 and not 1901.

Several of Customs important business systems are being redeveloped or replaced and Year 2000 compliance is a key requirement. These include our financial and human resource management systems. Year 2000 will not be a problem for PASS, the international passenger processing system, because it will be replaced well before 2000.

Many of the commercial systems require substantial work to have them Year 2000 compliant, including EXIT, SEA and AIR CARGO, COMPILE, CLEAR and REEF. Project plans are in place for this work.

Year 2000 compliance — a definition

According to management consultants Coopers & Lybrand, Year 2000 compliance means that neither performance nor functionality is affected by dates before, on and after 1 January 2000. In particular:

• No value for current date will cause any interruption in operation.

• Date-based functionality must behave consistently for all dates.

• In all interfaces and data storage, the century in any date must be specified either explicitly or by unambiguous algorithms or interfacing rules.

• 2000 must be recognised as a leap year.

Between September 1997 and June 1998, Customs aims to have all changes to core business applications coded, tested, implemented and ready to begin integration testing for Year 2000.

From September 1998, facilities for integrated testing with clients and agencies are planned to be available for several months. This will provide an opportunity for clients to send 'dummy' data to a test environment to iron out any problems in our systems or theirs.

It is planned that all Customs systems will be signed off by the responsible managers as Year 2000 compliant by December 1998. This leaves 1999 free to fix any problems.

But for Customs to feel confident that it is fully compliant, we will also need to feel confident about the readiness of the businesses and other agencies with which we will interact.

Factors influencing our present high level of confidence are the strong corporate support and commitment within the organisation and the plans for extensive consultation and cooperation with business and industry, particularly through peak associations.

Official notice of these activities and information on overall progress will be sent to all affected organisations as a formal Australian Customs Notice. Large business clients and peak industry associations will receive more detailed information. Customs will also provide some resources to assist industry with information sessions and information packs. Interested businesses should liaise with their industry associations rather than contact us and those bodies should contact either their Customs client representative or the Customs Year 2000 Project Manager, Noel Mungovan, on 02 6275 5754.

Customs has added a Year 2000 section to its Internet site at **http://www.customs.gov.au**

The section will cover specific Customs Year 2000 issues. Any suggestions on content would be appreciated.

Other useful Year 2000 information can be obtained from:

The Australian Information Industry Association **http://www.aiia.com.au** or by phoning Michel Hedley on 02 6282 4700.

Office of Government Technology (OGIT) Internet site **http://www.ogit.gov.au**

A Year 2000 Internet site for New South Wales government activity is at **http://www.y2k.gov.au**

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