

# Y2K Compliance in The Equal Opportunities Commission

## Introduction

There are in operation four computer and embedded systems in the Equal Opportunities Commission (EOC). They include the computerised Complaint Handling System (CHS), Novell server (using Novell Netware version 3.12) for the Local Area Network (LAN), telephone voice mail system and Window NT server for the Accounts Office. These systems will continue to be operational after 31 December 1999.

2. All the above mentioned computer and embedded systems are for internal use. None of them is mission-critical which would have adverse consequences on public safety and health, payment and revenue, or critical service to the public.
3. The following paragraphs aim at informing Members on the implementation of the Y2K compliance on the computer and embedded systems mentioned in paragraph 1, in particular, on four aspects: (a) extent of the Y2K problem; (b) resources to tackle the problem; (c) progress of Y2K rectification exercise and (d) contingency plan.

## Extent of the Y2K Problem

4. In response to the government's initiative over the issue of Y2K compliance, the EOC office has launched an awareness exercise in May 1998 to review its computer and embedded systems. Among the computer systems used in the EOC office, the computerised Complaint Handling System (CHS) is considered to be the most useful to the EOC's operation since it has built up a database of enquiries and complaints in parallel with their physical records in individual case files. Both the external developer and our Assistant Computer Officer (ACO) have checked and confirmed that the CHS can be functional beyond Y2K. Likewise, the Windows NT server in the Accounts Office has also been confirmed by the software vendor as Y2K compliant.
5. Systems in the EOC office which have been found to be non-Y2K compliant are as follows:

Non-Y2K compliant Computer / Embedded System	% of Non-Compliance
Novell Server of Local Area Network (LAN)	20%
Telephone Voice Mail System	10%

(Position in May 1998)

6. The 20% non-compliance of the Novell server has been estimated on the basis that the entire EOC LAN consists of 3 portions as follows:
  - a. system volume which hosts the system application of the LAN (occupying 20% of the LAN storage capacity);
  - b. user volume which hosts the data created by the LAN users (occupying 20% of the LAN storage capacity);and
  - c. volume for CHS (occupying 60% of the LAN storage capacity).

Only the LAN system volume will be affected by the Novell server if the latter is found to have Y2K problem. The 10% non-compliance of the telephone voice mail system has been estimated on the basis of its utilisation rate, i.e. 1 out of 10 telephone call in average will be recorded into the voice mail system.

7. The EOC has defined and documented the potential impact of the Y2K problem. While Y2K non-compliance of the Novell server of the EOC LAN may result in software applications such as Microsoft Office not accessible to the users, similar problem in the voice mail system may result in telephone messages recorded with incorrect dates. Nevertheless, these problems are not critical enough to adversely affect the EOC's operation as they can easily be fixed using the method stated in paragraph 10 or following the contingency plans described in paragraph 16.

**Resources to tackle the Y2K Problem**

8. In the case of Y2K non-compliance, the EOC has a contingency plan to switch over to the computer and embedded systems concerned as described in paragraph 16. The financial implications for switching over are estimated to be about \$100,000 which the EOC has already provided for.

9. Currently, the Chairperson (C/EOC) of the EOC is personally overseeing the implementation of the Y2K compliance exercise in the EOC office. She is assisted by the Director (Administration) (D(A)) who is responsible for monitoring the progress of the rectification. The rectification will be undertaken by the Assistant Computer Officer (ACO) who is a professional with the support from the Senior Equal Opportunities Officer (Administration) (SEOO(A)). Progress Reports on Y2K Compliance in NGOs have been prepared regularly and personally signed by the C/EOC for submission to the Secretary for Information Technology and Broadcasting via Home Affairs Bureau (HAB).

10. Several action plans have been drawn up for the Y2K rectification exercise as follows:

**Novell Server of the EOC LAN**

<p>10/1998-2/1999 (1st Phase -hardware test)</p>	<ul style="list-style-type: none"> <li>• A globally used program for fixing Y2K problem called 'Fixed 2000' has been downloaded to test the computer chips of the workstations linked to the LAN.</li> <li>• A simulation has been performed to manually tune the timer of each workstation and reboot to see if it can work beyond Y2K.</li> </ul>
<p>3/1999-8/1999 (2nd Phase - software test)</p>	<ul style="list-style-type: none"> <li>• Patch files will be downloaded from the Novell Co. to test and applied to fix the Novell server.</li> </ul>

**Telephone Voice Mail System**

2/1999	<ul style="list-style-type: none"><li>• The vendor, Tricom, has been engaged to test and upgrade the telephone voice mail system for Y2K compliance by February 1999.</li></ul>
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11. No information technicians have been employed from outside vendors except for the telephone voice mail system where its original vendor, Tricom, was engaged to undertake the rectification work.

### **Progress of Y2K Rectification Exercise**

12. The Y2K rectification exercise in EOC started in October 1998. The target completion date for rectification to both the Novell server of the EOC LAN and its telephone voice mail system is August 1999. Since only two systems have Y2K compliance problem, rectification to both systems commenced simultaneously.

13. As at present (position at 15 April 1999), the EOC office has attained the following progress in the implementation of its Y2K compliance exercise:

#### **Telephone Voice Mail System (100% progress)**

- It has been fully rectified since a full system upgrade was performed on 26 February 1999 by the vendor, Tricom, which has certified the system for Y2K compliance.

#### **Novell Server of the EOC LAN**

##### **1st Phase Rectification - Hardware Test (100% progress)**

- All 72 workstations linked to the Novell server have passed the hardware tests at end of February 1999.

##### **2nd Phase Rectification - Software Test ( 10% progress)**

- A patch file has been downloaded from Novell's Internet web's site. Memory space has been calculated for a full backup of the LAN data. It is estimated that both the patch download and the memory calculation for backup which have now been completed amount to 10% progress of the software test. Pending a full backup of all the data in the EOC LAN by the end of April 1999, the downloaded patch file will be tested and applied for fixing the Novell server.

14. Over 80 % of the rectification work has now been completed. It is estimated that full rectification work can be completed by August 1999 the latest as mentioned in paragraph 10 before.

15. Since EOC's computer systems do not involve any data exchange with any outside parties, there is no need to develop a Y2K supplier/customer chain management strategy for compliance testing.

#### **Contingency Plan**

16. The EOC has developed contingency plans in the event of Y2K non-compliance of its

computer and embedded systems. If the rectification mentioned in paragraph 13 is not successful, arrangements will be made for the following:

- a. To have the EOC LAN switched over from Novell server to Microsoft's network or Novell GroupWare 5.0 which is Y2K compliant; and
- b. To have switched over to another voice mail system which is Y2K compliant.

17. No publicity programme will be launched to keep the public informed of the latest development of the Y2K compliance exercise within the EOC office and its related contingency plan since they are not directly affecting the public.

Equal Opportunities Commission

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**Checklist on key issues related to the Y2K problem**

**Note :**

- a) The questions are worked out to facilitate members' consideration of the subject matter and are by no means exhaustive. Individual Panels are at liberty to raise further questions.
- b) Individual Government Bureau will also oversee the Y2K-compliance exercise within other Non-Government Organizations (NGOs) under its policy portfolio.
- c) Whilst two sets of questions are drawn up for the Administration and NGOs separately, the majority of which are interchangeable as appropriate.

**Questions put to the Administration**

- 1. Extent of the Y2K problem
  - (a) What are the policy areas and related NGOs overseen by your Bureau? Which are the mission-critical computer and embedded systems?
  - (b) Has your Bureau conducted a Y2K awareness campaign?
  - (c) Has your Bureau defined and documented the potential impact of the Y2K problem?
  - (d) What are the potential risks of the Y2K computer failures to our daily lives/transactions?
- 2. Resources to tackle the problem
  - (a) What are the resources (in terms of funds and manpower) in your Bureau/departments devoted to the Y2K problem? What is the involvement of top management?
  - (b) Are you using internal or external resources?
  - (c) Are "business" as well as "information technology" staff involved in the project?
  - (d) Who is in charge of the project, a professional or a generalist?
  - (e) Can he communicate efficiently and effectively with parties concerned, both within and outside the Government? Does he have the necessary technical capability and authority to do so?
  - (f) How have you organized your Y2K work? (e.g. setting up a steering committee to oversee the progress of the exercise and to take follow-up actions as appropriate). Have you documented the related work plans and decisions?

3. Progress of Y2K rectification exercise

- (a) When did the Bureau/department start to take up the Y2K-compliance exercise? What is the target timetable/schedule for completion of the project? Do you have a priority programme for different mission-critical computer and embedded systems? If so, please provide details? If not, why not?
- (b) What percentage of the work of repairing or replacing mission-critical computer and embedded systems have you completed? Please provide details.
- (c) Have you developed a Y2K supplier/customer chain management strategy?
  - Do other business partners/suppliers of your Bureau have Y2K-compliant plans in place? Will you interact with them or other clients through Internet or other remote systems?
  - Please provide information on interface and data exchange issues.
- (d) How are you going to test the reliability of the various mission-critical computer and embedded systems under your policy portfolio in an integrated manner to ensure that they are all Y2K-compliant?
- (e) What is your Bureau's involvement in the Y2K rectification exercise undertaken by related NGOs?
- (f) How can you ensure that NGOs will achieve Y2K-compliance within your schedule? How are you going to follow-up on the progress and slippage of the Y2K project as reported by NGOs?

4. Contingency plan

- (a) Have you designed, tested, and put in place plans for internal and external contingencies?
  - What are the objectives of the contingency plans?
  - What are the criteria for invoking the contingency plans?
  - What are the expected duration of the contingency plans?
  - What are the procedures for invoking contingency mode?
  - What are the resource plan for operating in contingency mode?
  - How are you going to test the effectiveness of the contingency plans?
  - Will you involve different NGOs in the exercise, both at the testing and implementation stages? If not, why not?
  - What are the details of the related publicity programme?

## Questions put to NGOs

1. Extent of the Y2K problem
  - (a) Which are the mission-critical computer and embedded systems?
  - (b) Has your organization conducted a Y2K awareness campaign?
  - (c) Has your organization defined and documented the potential impact of the Y2K problem?
  - (d) What are the potential risks of the Y2K computer failures to our daily lives/transactions?
  
2. Resources to tackle the problem
  - (a) What are the resources (in terms of funds and manpower) in your organization devoted to the Y2K problem? What is the involvement of top management
  - (b) Are you using internal or external resources?
  - (c) Are “business” as well as “information technology” staff involved in the project?
  - (d) Who is in charge of the project, a professional or a generalist?
  - (e) Can he communicate efficiently and effectively with parties concerned, both within and outside the organization? Does he have the necessary technical capability and authority to do so?
  - (f) How have you organized your Y2K work? (e.g. setting up of a steering committee to oversee the progress of the exercise and to take follow-up actions as appropriate). Have you documented the related work plans and decisions?
  
3. Progress of Y2K rectification exercise
  - (a) When did your organization start to take up the Y2K-compliance exercise? What is the target timetable/schedule for completion of the project? Do you have a priority programme for different mission-critical computer and embedded systems? If so, please provide details? If not, why not?
  - (b) What percentage of the work of repairing or replacing mission-critical computer and embedded systems have you completed? Please provide details.

- (c) Has your organization developed a Y2K supplier/customer chain management strategy?
  - Do other business partners/suppliers of your organization have Y2K-compliant plans in place? Will you interact with your customers through Internet or other remote systems?
  - Please provide information on interface and data exchange issues.
- (d) Does your organization have comprehensive testing strategies for both internal and external systems?
  - What are your plans for testing?
  - Do you have a documented plan?

4. Contingency plan

- (a) Have you designed, tested, and put in place plans for internal and external contingencies?
  - What are the objectives of the contingency plans?
  - What are the criteria for invoking the contingency plans and who are responsible for activating and overseeing the contingency plans?
  - What are the expected duration of the contingency plans?
  - How are you going to test the effectiveness of the contingency plans?
  - How is your organization accountable to the respective Government Bureau for formulation and implementation of the contingency plans?
  - Will your organization launch a publicity programme to keep the public informed of the latest development of the Y2K-compliance exercise within your organization and the related contingency plan?