

## **APPENDIX “UU”**

12 September 2002

**Analysis of the Funding Status of  
the Pensioners' Insurance Fund  
as at January 1, 2002**

Nortel Networks Limited

**MERCER**

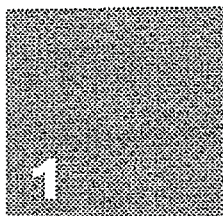
Human Resource Consulting



Marsh & McLennan Companies

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## Summary of Results

### Financial Position at January 1, 2002

The last valuation of the Pensioners' Insurance Fund (the "Plan") was as at January 1, 1998. The following table presents the results of the January 1, 2002 valuation, compared to the results of the previous valuation:

Financial Position – Funding Basis	All Amounts in \$000 Cdn.	
	Jan 1/02	Jan 1/98
Actuarial value of assets	\$63,551	\$54,040
Actuarial liability	\$74,931	\$60,058
Funding excess (unfunded liability)	(\$11,380)	(\$6,018)
Estimated claims for the year	\$5,296	\$4,614

<sup>1</sup> The asset value reported as at Jan 1/98 is the book value of assets. We have used the market value for the determination of the financial position as at Jan 1/02

The deterioration in the financial position, from January 1, 1998 to January 1, 2002, is primarily the result of the new liabilities established for employees who retired from 1998 to 2000. These new retirement liabilities exceed the sum of company contributions made to the Plan and excess investment return gains (i.e., above the 8.0% per annum assumed) over the four years. There has been a net gain due to favourable mortality and interest experience but this gain is offset by the impact of a change in the actuarial assumptions. A reconciliation of the funded status from January 1, 1998 to January 1, 2002 is provided in Section 3 of this report.

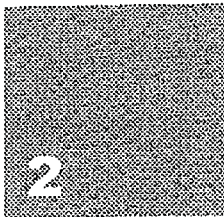
### **Contribution Requirement for 2003**

Currently, there is no legislative requirement on the funding of company paid retiree life insurance plans.

We understand that the Company has not contributed to the Plan since December 31, 1999 and does not expect to contribute to the fund in the near future. Hence, we have not determined the amount required to eliminate the unfunded liability as at January 1, 2002.

### **Estimated Financial Position at December 31, 2002**

As of January 1, 2002, the Plan had an unfunded liability of \$11,380,000. Based on an extrapolation of these results, if the Plan earns investment income of 7% per annum for 2002, we anticipate that the financial position of the Plan will continue to deteriorate. Specifically, we estimate that the unfunded liability will reach \$15,600,000 by December 31, 2002.



## **Report on the Actuarial Valuation as at January 1, 2002**

An actuarial valuation of the Nortel Networks Limited (the "Company") Pensioners' Insurance Fund (the "Plan") as at January 1, 2002 has been completed and the results are contained in this report.

The purpose of this valuation is to determine:

- the funded status of the Plan as at January 1, 2002, and
- the projected funded status of the Plan as at December 31, 2002

The report will disclose any events that have affected or will affect the Plan's funded status.

### **Plan Assets**

The Plan's asset value used in the assessment of the funded status is based on the market value as at January 1, 2002. An analysis of the investment return and a reconciliation of the Plan's assets are provided in Section 6.

### **Plan Provisions**

This valuation reflects the provisions of the Plan as at January 1, 2002. The Plan has been modified since the date of the previous valuation. Effective May 1, 2000, the Company introduced the Capital Accumulation and Retirement Program (CARP) to non-union employees. Similarly, the Savings Accumulation Retirement Program (SARP) was introduced to union employees effective January 1, 2001. Both of these programs allow the employee to elect to either remain in the current (grandfathered) retirement plan or to

change the benefits provided to them upon retirement. Concurrent changes were made to the retiree life and healthcare benefits offered to retiring employees. As at January 1, 2002, none of the retirees under the new programs have met the eligibility criteria for post-retirement benefits, and hence, there is no impact on the actuarial liability used for funding the Pensioners' Insurance Fund. A summary of the Plan provisions is provided in Section 9.

## Membership Data

The valuation reflects the membership data as at January 1, 2002. An analysis of the membership data is provided in Section 8.

## Actuarial Methods and Assumptions

We have used the same valuation assumptions and methods as were used for the valuation as at January 1, 1998, except for the assumed mortality rates and investment return on the Plan's assets. The mortality assumption has been changed from the Group Annuity Mortality Table (GAM) 1983 to the GAM 1994 Table, consistent with the assumption used for the funding valuation of Company's pension plans. The expected rate of investment return has been reduced from 8% to 7% per annum. The change of the mortality and interest rate assumptions has resulted in a net increase of approximately \$2.9 million in the actuarial liability. The assumptions used for purposes of this valuation are described in detail in Section 7.

The valuation does not account for the impact of the optimization and divestiture activities occurring in 2002, as we do not have sufficient information at this time to estimate the impact. To the best of my knowledge, there have been no other events subsequent to the valuation date which, in my opinion, would have a material impact on the results of the valuation.

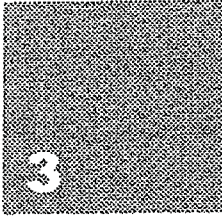
Respectfully submitted,

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Amy Chow  
Fellow of Society of Actuaries  
Fellow of Canadian Institute of Actuaries

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Date



## **Financial Position of the Plan**

### **Valuation Results — Going-Concern Basis**

When conducting a valuation on a going-concern basis, the relationship between the respective values of assets and accumulated benefits is determined, assuming the plan will be maintained indefinitely.

### **Financial Position**

The results of the valuation as at January 1, 2002, in comparison with those of the previous valuation as at January 1, 1998, are summarized on the following page.



Financial Position — Going-Concern Basis

	Jan 1/02	Jan 1/98
Actuarial value of assets <sup>2</sup>	\$63,551	\$54,040
Actuarial liability		
Present value of accrued benefits for:		
■ Nortel Networks Non-Unionized <sup>3</sup>	\$38,324	\$32,153
■ Nortel Networks Unionized	\$30,766	\$23,963
■ Nortel Technology Non-Unionized	\$5,841	\$3,942
Total liability <sup>4</sup>	\$74,931	\$60,058
Funding excess (unfunded liability)	(\$11,380)	(\$6,018)

**Funded Status at January 1, 2002 for Nortel Networks and Nortel Technology Separately**

The results of the valuation at January 1, 2002 for Nortel Networks and Nortel Technology separately are summarized below:

	Nortel Networks	Nortel Technology	Total
Market value of assets	\$56,873	\$6,678	\$63,551
Actuarial liability	\$69,090	\$5,841	\$74,931
Funding excess (unfunded liability)	(\$12,217)	\$837	(\$11,380)

<sup>2</sup> The asset value reported as at Jan 1/98 is the book value of assets. We have used the market value for the determination of the financial position as at Jan 1/02.

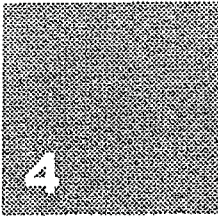
<sup>3</sup> Including liabilities for the closed NEDCO group of retirees.

<sup>4</sup> Excluding provincial sales taxes and premium taxes

## Reconciliation of Financial Position

An unfunded liability of \$11,380,000 as at January 1, 2002, is reconciled with the unfunded liability of \$6,018,000 as at January 1, 1998, as follows:

Funding excess (unfunded liability) as at Jan 1/98	(\$6,018)
Interest on funding unfunded liability at 8.00% per year to Jan 1/02	(\$2,169)
Contribution from Jan 1/98 to Jan 1/02 with interest	\$3,502
Gain/(Loss) on return on assets	\$1,789
Gain/(Loss) on new retirees since Jan 1/98	(\$11,843)
Gain/(Loss) on mortality experience	\$8,283
Impact of changes in assumptions (mortality and interest)	(2,924)
Funding excess (unfunded liability) as at Jan 1/02	(\$11,380)



## **Projection of Funded Status to December 31, 2002**

The funded status of the Plan at January 1, 2002 is used as the starting point for a projection of the funded status to December 31, 2002

### **Projection Approach**

In projecting the funded status of the Plan to December 31, 2002, the following assumptions were made:

- Employer contributions to the Plan during 2002 were assumed to be nil
- The Plan would earn investment income (realized and unrealized) of 7% per annum during 2002, after expenses
- An estimate of the liability for new retirements during the year was made based on the average liability generated by new retirees in the last three years, projected forward to 2002 assuming that the average initial life insurance amount increases by 2% per annum.
- Claim payments for 2002 were estimated based on the mortality assumption and the insurance amounts in-force for 2002
- Claim expenses were assumed to equal 1 5% of claim payments Provincial sales taxes and premium taxes have been excluded as these amounts are paid outside the fund

## Projection Data

Based on this approach, our projections of the number of retirees with life insurance as of December 31, 2002 are:

Number of Retirees covered at January 1, 2002	9,258
Expected New Retirees During 2002	505
Expected Deaths During 2002	(251)
Expected Number of Retirees covered at December 31, 2002	9,512

## Funded Status Estimate at December 31, 2002

Based on the approach and projected data outlined above, the estimated financial position of the Plan at December 31, 2002 is as follows:

	Market Value of Assets	Liabilities
	(\$000's)	(\$000's)
At January 1, 2002	\$63,551	\$74,931
Plus		
Employer Contributions	0	N/A
Investment Income/Interest	4,263	5,284
Liability for New Retirements	N/A	3,200
Less		
Estimated Paid Claims and claims expenses	(5,296)	(5,296)
Provincial Sales and Premium Taxes	0	N/A
At December 31, 2002	\$62,518	\$78,119

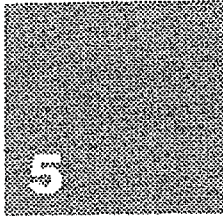
As a result, as of December 31, 2002, the Plan is estimated to have an unfunded liability of \$15,601,000 (\$62,518,000 less \$78,119,000).

### **Sensitivity of Results to the Fund Rate Assumption**

The financial position at December 31, 2002 is highly dependent on the amount of investment income earned during 2002. Differences between the actual investment income earned during 2002 and the assumed investment income of \$4,263,000 will directly impact our estimate of the funded status of the Plan at December 31, 2002.

For example, estimates of the funded status of the Plan based on various scenarios of fund rates before expenses for 2002 are as follows:

<b>Assumed Fund Rate of Return for 2002</b>	<b>Estimated Unfunded Liability at December 31, 2002</b>
6%	\$23.7 million
7%	\$15.6 million
8%	\$8.1 million



## Actuarial Opinion

- In my opinion,
  - the data on which the valuation is based are sufficient and reliable for the purposes of the valuation,
  - the assumptions are, in aggregate, appropriate for the purposes of determining the funded status of the plan as at January 1, 2002 on a going-concern basis, and
  - the methods employed in the valuation are appropriate for the purposes of determining the funded status of the plan as at January 1, 2002 on a going-concern basis.
- This report has been prepared, and my opinion given, in accordance with accepted actuarial practice.

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Amy Chow  
Fellow of Society of Actuaries  
Fellow of Canadian Institute of Actuaries

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Date



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## Plan Assets

### Sources of Plan Asset Data

The asset values presented are as provided by Nortel, as reported on the Nortel Networks Limited Pensioners' Insurance Fund, with no further verification.

### Yield on the Fund

The valuation as of January 1, 1998 assumed returns of 8.0% per annum. The actuarial yields earned by the fund (based on market value) after expenses over the four-year period to January 1, 2002 were:

1998	N/A
1999	(2.7%)
2000	9.8%
2001	6.3%
Average 1999-2001	4.3%

### Market Value of Fund

The market value of the Pensioners' Insurance Fund as of January 1, 2002 is \$63,551,000 as compared with \$50,040,000 as of January 1, 1998.

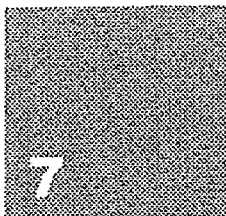
## Reconciliation of Plan Assets

The fund transactions for the period from January 1, 1998 to January 1, 2002 are summarized as follows:

### Reconciliation of Plan Assets (Market Value)

	Nortel Networks	Nortel Technology	Total
Book Value as at January 1, 1998	\$48,879	\$5,161	\$54,040
Market Value as at January 1, 1998	N/A	N/A	N/A
Company's contributions	\$1,466	\$0	\$1,466
Investment income	\$3,408	\$374	\$3,782
Net capital gains (losses)	N/A	N/A	N/A
Claims paid	(\$3,569)	(\$113)	(\$3,682)
Accrued Claims	(\$6)	\$9	\$3
Administration fees	(\$130)	(\$3)	(\$133)
Market Value as at January 1, 1999	\$57,093	\$6,192	\$63,285
Company's contributions	\$1,452	\$0	\$1,452
Investment income	\$3,521	\$384	\$3,905
Net capital gains (losses)	(\$4,808)	(\$829)	(\$5,637)
Claims paid	(\$1,061)	\$261	(\$800)
Accrued Claims	\$296	\$7	\$303
Administration fees	(\$4)	\$0	(\$4)
Market Value as at January 1, 2000	\$56,489	\$6,015	\$62,504
Company's contributions	\$0	\$0	\$0
Investment income	\$3,286	\$352	\$3,638
Net capital gains (losses)	\$2,021	\$234	\$2,255
Claims paid	(\$4,297)	(\$228)	(\$4,525)
Accrued Claims	\$0	\$0	\$0
Administration fees	\$0	\$0	\$0
Market Value as at January 1, 2001	\$57,498	\$6,373	\$63,872
Company's contributions	\$0	\$0	\$0
Investment income	\$3,352	\$373	\$3,725
Net capital gains (losses)	\$131	\$43	\$174
Claims paid	(\$4,109)	(\$111)	(\$4,220)
Accrued Claims	\$0	\$0	\$0
Administration fees	\$0	\$0	\$0
Market Value as at January 1, 2002	\$56,873	\$6,678	\$63,551





## Actuarial Methods and Assumptions

### Actuarial Valuations Methods — Going-Concern Basis

#### Valuation of Assets

We have used market value of the assets in our report, as provided by the Company.

#### Valuation of Actuarial Liabilities

The *actuarial liability* is the present value of benefits, including claims cost expenses, accrued for current retirees. The liability for active employees is not considered for funding.

The *funding excess* or *unfunded liability*, as the case may be, is the difference between the market value of assets and the actuarial liability

### Actuarial Assumptions — Going-Concern Basis

The actuarial value of benefits is based on economic and demographic assumptions. At each valuation, we determine whether, in our opinion, the actuarial assumptions are still appropriate for the purposes of the valuation, and we revise them if necessary.

In this valuation, we have used the same assumptions as in the previous valuation except as noted. Emerging experience will result in gains or losses that will be revealed and considered in future actuarial valuations. For this valuation, we have used the following assumptions:

## Economic Assumptions

### Investment Return

We have assumed that the investment return on the actuarial value of the fund, net of investment expenses charged to the fund, will average 7% per year over the long term.

### Salary Increases

Not applicable.

## Demographic Assumptions

### Retirement Age

We have assumed that active members and members on layoff or leave will retire as per the following tables. Members currently in receipt of LTD benefits are assumed to retire at age 65.

#### Program

#### Retirement Scale

Traditional (Grandfathered and Non- Grandfathered) Programs	
■ Managerial plan (Part I)	5% per year from Company-Initiated Retirement Age <sup>(1)</sup> to Employee-Initiated Retirement Age <sup>(2)</sup>  40% at Employee-Initiated Retirement Age  15% per year from Employee-Initiated Retirement Age to Age 65  100% at Age 65
■ Managerial plan (Part II)	5% per year from Age 55 to Age 59  20% per year from Age 60 to Age 64  100% at Age 65

Program	Retirement Scale
■ Negotiated plan	15% per year from Company-Initiated Retirement Age <sup>(1)</sup> to Employee-Initiated Retirement Age <sup>(2)</sup> 40% at Employee-Initiated Retirement Age 15% per year from Employee-Initiated Retirement Age to Age 65 100% at Age 65
Balanced Program	
■ Managerial plan only	Same as Managerial Plan for Part II members
SARP Program	
■ Negotiated plan only	Same as Negotiated Plan for Traditional Programs

(1) Company-Initiated Retirement Age refers to the earlier of:

- age 55 with 25 years of pensionable service, and
- 30 years of pensionable service

(2) Employee-Initiated Retirement Age refers to the earlier of:

- age 65,
- age 60 with age plus pensionable service equal to 80 or more, and
- age 55 with age plus pensionable service equal to 85 or more; or
- age 55 with 20 years of pensionable service for female members, in service with Nortel Networks on May 31, 1973.

#### Termination of Employment

Not applicable.

#### Mortality

The 1994 Group Annuity Mortality Table has been adopted as the measure of mortality for Plan members. According to this table, the life expectancy at age 65 is 17.9 years for a man and 21.3 years for a woman.

#### Disability Incidence and Recovery

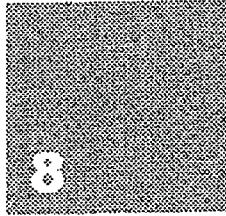
Not applicable

### Claims Expenses

We have made an allowance for the administrative expenses of 1.5% of claim payments

### Taxes

We have made no allowances for provincial sales taxes and premium taxes as we understand these are paid outside the Plan



## **Membership Data**

### **Analysis of Membership Data**

The actuarial valuation is based on membership data as at January 1, 2002, provided by Nortel Networks Limited.

We have applied tests for internal consistency, as well as for consistency with the data used for the previous valuation. The results of these tests were satisfactory.

Plan membership data is summarised below. For comparison, we have also summarised corresponding data from the previous valuation.



## Membership Data

	Jan 1/02	Jan 1/98
<b>Nortel Networks Non-Unionized:</b>		
■ Number	3,687	3,083
■ Number With Life Insurance <sup>5</sup>	3,168	3,050
■ Average Age	70.4 yr.	70.0 yr.
■ Average Insurance Amount <sup>5</sup>	\$42,571	\$35,497
<b>Nortel Networks Unionized:</b>		
■ Number	6,003	5,227
■ Number With Life Insurance	5,590	5,110
■ Average Age	68.0 yr.	66.6 yr.
■ Average Insurance Amount	\$18,420	\$17,756
<b>Nortel Technology Non-Unionized:</b>		
■ Number	547	353
■ Number With Life Insurance	480	326
■ Average Age	66.1 yr.	66.9 yr.
■ Average Insurance Amount	\$57,855	\$50,414
<b>Total:</b>		
■ Number	10,237	8,663
■ Number With Life Insurance	9,258	8,486
■ Average Age	68.8 yr.	67.8 yr.
■ Average Insurance Amount	\$28,781	\$25,386

<sup>5</sup> Includes NEDCO retirees.

## Valuation Basis

The following tables provide a breakdown of the average life insurance amounts by year of retirement:

Year of Retirement	Number of Retirees	Average Age	Current Average Insurance Amount
<b>Nortel Networks Non-Unionized</b>			
Pre-1991	1,661	77.7	\$28,120
1991	175	67.8	\$36,119
1992	118	67.3	\$36,178
1993	155	65.5	\$44,356
1994	131	63.8	\$46,545
1995	113	62.7	\$45,084
1996	143	61.9	\$50,269
1997	52	62.1	\$59,474
1998	71	62.8	\$57,352
1999	156	60.0	\$77,605
2000	200	59.4	\$78,045
2001	213	57.8	\$85,840
<b>Total</b>	<b>3,188</b>	<b>70.4</b>	<b>\$42,571</b>
<b>Nortel Networks Unionized</b>			
Pre-1991	2,194	75.7	\$13,650
1991	415	69.1	\$11,480
1992	281	68.1	\$15,199
1993	225	66.8	\$16,468
1994	568	65.0	\$18,108
1995	425	62.8	\$18,607
1996	418	60.5	\$19,601
1997	120	59.5	\$25,916
1998	161	60.8	\$29,456
1999	232	59.4	\$30,235
2000	316	57.9	\$33,911
2001	235	57.6	\$35,361
<b>Total</b>	<b>5,590</b>	<b>68.0</b>	<b>\$18,420</b>

**Analysis of the Funding Status of the Pensioners'  
Insurance Fund as at January 1, 2002**

Nortel Networks Limited

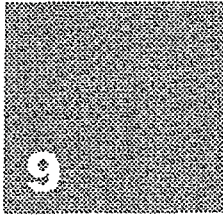
<b>Year of Retirement</b>	<b>Number of Retirees</b>	<b>Average Age</b>	<b>Current Average Insurance Amount</b>
<b>Nortel Technology Non-Unionized</b>			
Pre-1991	112	75.9	\$34,520
1991	16	69.1	\$36,019
1992	23	68.6	\$41,746
1993	34	68.7	\$39,941
1994	29	64.8	\$47,291
1995	25	65.1	\$50,505
1996	25	65.4	\$65,002
1997	23	65.3	\$63,824
1998	31	63.5	\$45,044
1999	58	61.9	\$73,904
2000	46	59.9	\$85,452
2001	58	58.7	\$97,745
<b>Total</b>	<b>480</b>	<b>66.4</b>	<b>\$57,855</b>
<b>Grand Total</b>	<b>9,258</b>	<b>68.8</b>	<b>\$28,781</b>

**Reconciliation of Membership**

**Pensioners with Life Insurance Coverage**

<b>Total at Jan 1/98</b>	<b>8,486</b>
New entrants	1,777
Deaths	(1,005)
<b>Total at Jan 1/02</b>	<b>9,258</b>





## Summary of Plan Provisions

The post-retirement benefits sponsored by Nortel Networks (the "Company") and Nortel Technology are summarized below. Only those benefits for which the Company assumes some or all of the cost are included. In general, the Plan provides reducing insurance for Canadian retirees of the Company.

### Post-Retirement Group Life Insurance Plans

#### Nortel Networks and Nortel Technology Employees

##### Grandfathered Traditional Program

The initial amount of insurance at retirement is equal to the employee's basic annual salary at retirement rounded to the next higher \$1,000.

For employees retiring prior to 1991, the initial insurance amount decreases by 5% per year to an ultimate level of 75% of the initial amount after five years.

For employees retiring in 1991 and beyond, the initial insurance amount decreases by 5% per year to an ultimate level of 25% of the initial amount after 15 years with a minimum insurance amount of \$20,000.

For retirees on private payroll whose Band was 12 and above, and NEDCO retirees, the initial amount of insurance stays level after retirement.

### Non-Grandfathered Traditional Program

For employees who participate in the Non-Grandfathered Traditional Program (effective May 1, 2000), the retiree, upon retirement can choose between a \$35,000 company paid life insurance or a \$10,000 death benefit

### Balanced Program

For employees who participate in the Balanced Program (effective May 1, 2000), the retiree life benefit is the same as described in the Non-Grandfathered Traditional Program above.

### Investor Program

There are no retiree life benefits provided under the Investor Program.

## Unionized Employees

### Grandfathered Traditional Program

The initial amount of insurance is dependent upon the employee's job grade at retirement. The initial amount of insurance has been modified over the years. For all CAW retirees and for COEU retirees who retired before March 1, 2000, the initial amount of insurance is based upon the Benefit Group as follows:

Benefit Group	Amount of Insurance
1	\$32,500
2	\$34,000
3	\$36,500
4	\$40,000
5	\$43,500

For COEU employees who retire on or after March 1, 2000, the initial amount of insurance is \$43,500 for all Benefit Groups.

For employees retiring prior to 1991, the initial amount decreases by 5% per year to an ultimate level of 75% of the initial amount after five years.

For employees retiring in 1991 and later, the initial insurance amount decreases by 5% per year to an ultimate level of 50% of the initial amount after ten years with a minimum insurance amount of \$10,000

### **SARP Program**

For employees belonging to the CAW and COEU Unions (Program II Unions), the SARP program was introduced as at January 1, 2001. The life insurance coverage is as follows:

- \$30,000 in company paid life insurance or \$10,000 death benefit for CAW retirees
- \$35,000 in company paid life insurance or \$10,000 death benefit for COEU retirees

### **Retiree Contributions**

The full cost of this life insurance coverage is paid by the Company. No retiree contributions are required

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## **APPENDIX “VV”**