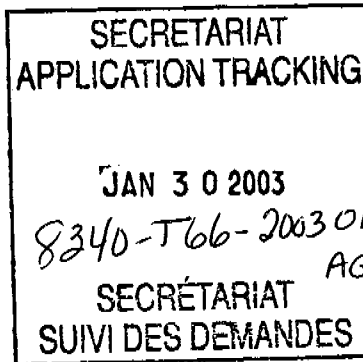




TELUS
31 - 10020 - 100 Street NW
Edmonton, Alberta
Canada T5J 0N5
telus.com
780 493 6590 Telephone
780 493 6519 Facsimile
willie.grieve@telus.com

Willie Grieve
Vice-President
Public Policy & Regulatory Affairs



January 27, 2003

Ms. Diane Rhéaume
Secretary General
Canadian Radio-television and
Telecommunications Commission
Ottawa, ON K1A 0N2

Dear Ms. Rhéaume

Re: Section 29/ Joint Operating Agreements – TCI and TELE-MOBILE COMPANY for the Eastern and Western Tekelec STPs

Attached for the Commission's approval pursuant to Section 29 of the *Telecommunications Act* are copies of the Agreements between TELUS Communications Inc. and TELE-MOBILE COMPANY specifying the framework for sharing the costs associated with operating and maintaining certain equipment for the Eastern and Western Tekelec STPs.

TCI respectfully requests that the Commission grant approval of the aforementioned agreement in due course.

Yours truly,

Willie Grieve
Vice President,
Public Policy & Regulatory Affairs

cc: Public Examination Room – Ottawa
Public Examination Room – Vancouver



**Joint Operating Agreement
Between
TELUS Communications Inc.
and
TELE-MOBILE For
The Eastern Tekelec STPs**

Proprietary Warning

1

The information contained herein is proprietary to TELUS and TM and may not be used, reproduced or disclosed to others except as specifically permitted in writing by the originators of the information. The recipient of this information, by its retention and use, agrees to protect the same and the information therein from loss, theft and compromise.

Table of Contents

ARTICLE 1 – PURPOSE AND DURATION3

ARTICLE 2 – SHARED USE3

ARTICLE 3 – JOINT OPERATIONS4

ARTICLE 4 – GOVERNANCE & DISPUTE RESOLUTION4

ARTICLE 5 – PROVISIONING AND MAINTENANCE.....5

1. SCOPE.....5

2. SS7 LINK - BASIC INFORMATION5

 2.1 Method of Interconnection5

 2.2 Pre-Service Testing5

3. WORK FLOW CHART FOR PROVISIONING & OPERATION5

 3.1 Subsequent Signaling Link Provisioning.....6

 3.2 Gateway Screening, GT Translation & Routing Table update6

 3.3 Utilization and Sizing6

 3.4 Planned Outage Control7

 3.5 Trouble Reporting - Resolution.....8

 3.6 Diversity and Link Records8

 3.7 SS7 Network Failures Control8

 3.8 SS7 Tools.....8

 3.8.1 Service Assurance:8

 3.8.2 Alarm monitoring:9

 3.8.3 Link Capacity:9

 3.9 Escalation Detail9

4. SIGN-OFF DECLARATION.....10

THIS JOINT OPERATING AGREEMENT is made

BETWEEN

TELUS COMMUNICATIONS INC., a company incorporated under the laws of Canada, domiciled at 3777 Kingsway, in the city of Burnaby, in the province of British Columbia, ("TCI")

AND TELE-MOBILE COMPANY, operating under the name TELUS Mobility, a general partnership formed under the laws of Ontario, domiciled at 200 Concilium Place, in the City of Scarborough, in the province of Ontario, ("TM")

WHEREAS the parties wish to establish a principled framework for sharing the costs associated with operating and maintaining certain equipment acquired to expand their businesses;

NOW THEREFORE in consideration of their mutual obligations and covenants, the parties agree as follows:

ARTICLE 1 – PURPOSE AND DURATION

TCI and TM will operate in good faith to share use of two signaling transfer point switches (the "STP Switches"). The Eastern common SS7 infrastructure (the "Infrastructure") includes the STP Switches, associated software, monitoring equipment, processor cards, and all incidental equipment.

This Agreement will come into effect as of March 1, 2003 and will remain in force for the entire useful life of the Infrastructure, including any additional equipment installed from time to time to maintain or incrementally upgrade the Infrastructure.

This Agreement may be terminated by either party upon delivery to the other of a termination notice with effect one year after the date of the notice. Upon receipt of a termination notice, each party will assign resources to develop a plan to migrate traffic from the Infrastructure to other assets before the termination date. During the migration period each party will operate in good faith to ensure no disruption of SS7 signaling service.

ARTICLE 2 – SHARED USE

Each parties' usage share of the Infrastructure is calculated on the basis of projected consumption rates, as measured by low-speed A-link equivalence, estimated annually on September 30th and applied over the following twelve month period. The parties will base their link forecasts on realistic projections from current use.

The link forecasts may be amended in the course of the following twelve month period, at the request of either party, if observed usage patterns depart substantially from the forecasts. A revision of the forecasts will be completed if, at any time, there is the addition of major core capacity to the Infrastructure.

Notwithstanding the unequal projected use of the Infrastructure, estimated initially at 22% TCI and 78% TM, each party will have right to the capacity and functionality of the STP Switches. Both parties will exercise commercially reasonable efforts, throughout the term of this Agreement, to accommodate the

unforeseen capacity requirements of the other. Any unused capacity, attributed in advance on the basis of link forecasts, will be made available to the other party in case of need.

For greater clarity, it is the intent of both parties that each be entitled to use the STP Switches to fully support its needs, insofar as such use does not degrade performance or compromise data integrity on the other party's network.

Each Party may share its use of the SS7 Infrastructure with its respective affiliates (as that term is defined in the *Canada Business Corporations Act*). TELUS Québec Inc. shall be deemed an affiliate of TCI and QuébecTel Mobilité, being a division of TELUS Solutions (Québec) Inc., shall be deemed an affiliate of TM, each entitled to share in the use of the SS7 Infrastructure on the terms described herein.

ARTICLE 3 – JOINT OPERATIONS

Each party requires the understanding of the necessary business practices and service level agreements of each other's operating environment in order to conduct business efficiently and effectively.

ARTICLE 4 – GOVERNANCE & DISPUTE RESOLUTION

Each party will nominate one engineering representative and one operation representative to act as a point of contact for issues relating to forecast usage, unforeseen capacity requirements, ongoing operations and maintenance of the Infrastructure, and financial accounting. These representatives will meet at least twice per year to address Infrastructure plans.

At the time of signing of this Agreement, the parties' nominees are:

For TELUS Communications Inc.

Scott Farkas	403-530-3267
Jim Merryfield	780-493-2089

For TELE-MOBILE COMPANY

John Beetham	905-305-5160
Mario Decaria	416-940 -4255

In the event of a dispute, the parties will use all reasonable efforts to resolve by negotiations, promptly and in an amicable manner, any dispute between the parties, whether arising during the term or at any time after the expiration or termination of this Agreement, which touches upon the validity, construction, meaning, performance or effect of this Agreement or the rights and liabilities of the parties under this Agreement.

Either party may give written notice of a dispute to the other party. It shall set forth particulars of the matters in dispute, the probable extent and value of the damage and relevant provisions of this Agreement. The other party shall reply to such notice no later than five (5) days after it receives or is considered to have received the written notice of dispute, setting out in such reply its grounds and other relevant provisions of this Agreement.

If the parties fail to resolve the dispute within ten (10) days after delivery of the reply required, within five (5) days thereafter, a senior representative of each party will meet to resolve the dispute.

ARTICLE 5 – PROVISIONING AND MAINTENANCE.

1. SCOPE

This document is limited to the provisioning and maintenance of SS7 services. The workflow for bilateral cooperation between TM and TCI is outlined to bring clarity for the operation, information exchange and service order processes.

Items not specifically identified in this document are considered to be out of scope.

Equipment Type	CLLI	Point Code	Software Version	Location
Markham Tekelec STP	TorontoSTP	1-187-255	Release 28	650 Hood Road, Markham Ontario
Montreal Tekelec STP	MontrealSTP	1-187-254	Release 28	3555 Pittfield Avenue St. Laurent Quebec

2. SS7 LINK - BASIC INFORMATION

2.1 Method of Interconnection

The signaling network interconnection for the TCI and TMQ SSP's will use the access link ("A-links") between TM STP and TCI, TMQ SSP's. Linksets (DS-0's) will be ordered on separate facilities to access mated STP for maximum diversity.

2.2 Pre-Service Testing

Pre-Service link testing will include a 24-hour BERT test, MTP level 2 and 3 testing as detailed in TCI SS7 Inter Operability Test document, a copy of which has been provided and approved by the parties. This will be followed by a five (5) day soak period. Acceptance limits will not be exceeded in any 24 hours interval during the five (5) day soak period. New level 4 services must be tested and accepted with a mutually agreed upon service document.

Following initial link acceptance, link activations / deactivations will be governed by TCI Network Activity Ground rules (NAG). Exception will be granted upon negotiation and bilaterally agreed on given situation.

3. WORK FLOW CHART FOR PROVISIONING & OPERATION

3.1 Subsequent Signaling Link Provisioning

Subsequent link orders (accompanied by the completed "CCS7 - MSO Planning Engineering Questionnaire (attached)) from TCI to TM STP must be delivered to TM Transmission Planning, and a copy to Fixed Network Engineering 30 business days in advance of the requested in-service date. Management escalation will be used for accelerating requests for link orders in cases where unforeseen circumstances arise to meet a 10-day turnaround time.

Company	Group	Current Contact	Contact Information	
			Telephone	E-Mail
TM	FNE Engineering	Donald Zhang	(416) 279-3345	Donald.zhang@telusmobility.com
	Transmission Planning	Sheung Leung	(416) 279-3161	Sheung.leung@telusmobility.com
	Translation East	Bill Barsley	(416) 279-7989	Bill.barsley@telusmobility.com
TELUS	National Platform Planning	Mike Barker Jim Merryfield	(250)470-5399 (780)493-2089	mike.barker@telus.com jim.merryfield@telus.com
	Network Assessment Specialist	Hector Lefebvre	(780) 493-4104	Hector.lefebvre@telus.com

3.2 Gateway Screening, GT Translation & Routing Table update

TM will employ Gateway screening to validate messages between TELUS SS7 Network and all foreign SS7 Networks. Each party manages their own GT translations, Gateway Screening or signaling routes as determined by the translation primes and supported by the technology. Work orders will be submitted to the Eastern STP primes for implementation. Joint committee will design and implement all the required processes.

3.3 Utilization and Sizing

TM PCS Engineering will monitor link utilization as well as be responsible to initiate all activities related to link provisioning. Sizing and link utilization will follow established guidelines. SS7 messaging traffic shall be evenly distributed among all combined linksets. Given the STP with the utilization redundancy, the utilization of each link accessing TM STP must be under 40% regardless the type of link, and initiate augments at 32% utilization or 80% of the 40%. An alert will be sent by TM Traffic Engineering to National Platform Planning (TCI) if the Utilization reaches 32% to allow sufficient notice to perform the appropriate link expansions activities. It is understood that the "owner" of the Service Switching Point

(SSP) affected will have ultimate and full responsibility for the sizing and determining link augments driven by their service needs, e.g. new services or nodes.

The algorithms to be used are as follows:

Low Speed Link Calculation

MAX (MSU TX/4,410,000 %, MSU RX/4,410,000 %)

Max is 4,410,000 bits per half hour

BYTRX means total bytes transmitted over a link during 30-minute period

BYTTX means total bytes received over a link during 30-minute period

Calculate the occupancy for the TRX and RCV direction, the greater number is used as the busy 1/2 hour occupancy.

80% occupancy will trigger an investigation and activity to augment the group.

Capacity is 35% of total link capacity to allow for fail over.

High Speed Link Calculation

MAX (MSU TX/120,938,580 %, MSU RX/120,938,580 %)

Max is 120,938,580 Octets per half hour

MSU TX means total bytes transmitted over a link during 30-minute period

MSU RX means total bytes received over a link during 30-minute period

Calculate the occupancy for the TRX and RCV direction, the greater number is used as the busy 1/2 hour occupancy.

80% occupancy will trigger an investigation and activity to augment the group.

Capacity is 35% of total link capacity to allow for fail over.

3.4 Planned Outage Control

TCI and TM will maintain the portion of the links that are within their respective network. TM has the operational responsibility for the SS7 signaling links in the Eastern STP. And TCI, TMQ has the operational responsibility in their SSP.

All planned outages should be mutually communicated in advance and governed by TM Network Activity Rules (attached).

Company	NMC Contact Info Info
TM	Tel: 1-800-391-1391 option 3 Email: nmc.tm@telus.com
TELUS	Change Management Centre for: Planned Activity Arrangement: 800-887-1221 option 3-2 Planned Activity updates: 800-877-1221 option 3-1; email: noceventmanager@telus.com Noc CCS7 Group for trouble report: 800-887-1221 option 2-4-2-1; email: ain@telus.com

3.5 Trouble Reporting - Resolution

When a network related trouble occurs and after the preliminary analysis, a trouble report can be submitted to the Network Operation Centre. TM will provide trouble status updates in a reasonable period.

Network Operation Centres:

Company	Contact
TM	TM Network Management Center Tel: 1-800-391-1391 option 3 ; Email: nmc.tm@telus.com
TELUS	Name: TELUS Event Manager Tel: 800-887-1221 option 3-1 ;

3.6 Diversity and Link Records

SS7 route diversity is defined as signaling linksets that are on physically and electronically separate paths. Proper three-way diversity is necessary between TCI STP and TM STP to ensure one single failure or disruption will not isolate one STP from another. TCI and TM will ensure diversity is maintained and routinely confirmed. Also, two-way diversity is required between TM STP and the TCI, TMQ SSP's. This will be ensured by TM FNE and Transmission Engineering.

3.7 SS7 Network Failures Control

TCI and TM agree to notify the other party of any SS7 network failures affecting inter-network traffic. In the event of catastrophic network congestion and local control measures prove ineffective; TCI and/or TM may remove the SS7 links from service upon notification. TM NMC will assume Command and Control role for the Network Recovery.

3.8 SS7 Tools

Each company has the operational responsibility for the monitoring of the links terminated to their respective STPs or SSPs for the purpose of monitoring, MSU tracing, maintenance and trouble shooting.

3.8.1 Service Assurance:

- TCI – NWV7
- TM – Sentinel

3.8.2 Alarm monitoring:

- o TM - OEMF

3.8.3 Link Capacity:

- o TM - Metrica

3.9 Escalation Detail

Escalation will be implemented when delays or problems are encountered and the commitment to correct delays or problems are not met within the specified time frame outlined in the table below.

Severity	Level 1	Level 2	Level 3
1	Immediate	>1 hour	>2 hours
2	Immediate	>4 hour	>8 hours
3	<2 hours	>8 hours	>24 hours
4	< 4 hours	>24 hours	

According to the severity of the impact to the network, the severity level associated with different scenarios as below:

Severity	Description
1	Loss of combined linkset (linksets to both STPs') Loss of X-HLR Loss of both STPs' Loss/isolation of one or more SPs'
2	Loss of combined linkset diversity Loss of more than 50% throughput on the combined linkset; or one link failure of a pair
3	Loss of 25% - 50% throughput on the combined linkset Or Single link failure
4	Trouble reports referred and not responded

Escalation Contacts:


Company	Escalation level	Attention	Telephone Number
TM	1	TM NOC	Tel: 1-800-391-1391 option 3 Email: nmc.tm@telus.com
	2	NOC Manager: Jeanette Butler Harley	Tel: (905) 305-5167 Mobile: (416)684-5167
	3	Manager: John Beetham	Tel: (905) 305-5160 Mobile: (416) 684-5160
TELUS	1	TELUS Event Manager	Tel: 800-887-1221 Option 3-1
	2	National Repair Answer Director Navin Arora	Tel: 780-493-7979 Page: 780-491-2744
	3	National Test Director Kevin Varga	Tel: 416-883-8766 Page: 416-377-2013

4. SIGN-OFF DECLARATION

On behalf of the each function group, by signing off this paper, we agree that we will guide our future cooperation for our STP activities according to the work flow outlined in the above documentation or as amended with mutual agreement from time to time.

TELE-MOBILE COMPANY Representative:

Print: Hilbert Chan, VP of Corporate Engineering

Signature: 

Date: Jan 10, 2003

TELUS Communications Inc. Representative:

Print: Don Towner, VP of National Service Assurance

Signature:  Date: 01/16/03