

29 January 2001

Ms Audrey Lee  
Director (Interconnection)  
Info-communications Development Authority of Singapore  
8 Temasek Boulevard  
#14-00 SunTec Tower Three  
Singapore 038988

Dear Ms Lee

**REQUEST FOR EXEMPTION**

Pursuant to section 2.6.1 of the Telecom Competition Code (TCC), we hereby request exemption from providing:

1. Physical Interconnection at Signalling Transfer Point;
2. Physical Interconnection at Local Switch;
3. Point of Access (POA) at Exchange Cable Vault;
4. Point of Access (POA) at Building Equipment Room;
5. Distribution Frame Access at Roadside Cabinets;
6. Virtual (Distant) Co-Location at SingTel Exchange Buildings;
7. Spectrum Management and Deployment Plan;
8. 1800/1900 Number Portability;
9. Facilities-Based Requesting Licensees with the ability to Physically Inspect Location.

We attach the justifications for each request for exemption in relation to the above.

Yours sincerely,

Ng Kwon Kee  
Director  
Network Integration & Interconnect

(1) **REQUEST FOR EXEMPTION: PHYSICAL  
INTERCONNECTION AT SIGNALLING TRANSFER POINT**

**TCC: Section 2.2 of Appendix Two**

“... Dominant Licensee must offer to allow traffic exchange to occur at the following POIs :

- Interconnect gateway switches
- **Signalling transfer points**
- Local switches (line side and trunk side)

- Justification:**
1. The SS7 signaling configuration used in establishing physical interconnection adopts the “associated signalling mode” i.e. direct SS7 links between the Requesting Licensees switch and SingTel’s IGS. This signalling mode is adopted in all existing network interconnections with the SingTel Network and will be able to support the interconnected calls between SingTel and the Requesting Licensee’s network.
  2. SingTel has provided added signalling security features to discard illegal and unrecognized signalling (SS7) messages at its IGSs. We would highlight that these signalling security features are not available at the STPs. Physical interconnection at the STP would pose a real threat to SingTel’s network security and integrity. Any invalid or erroneous messages or parameters will be propagated to the whole network through the STPs in the absence of any signalling security features. This may affect the performance of any switching systems connected on the STP which are not able to handle such erroneous messages or parameters.
  3. In light of the above, SingTel submits that there is no need to provide physical interconnection to the signalling transfer points (STPs) and request to be exempted from this obligation.

(2) **REQUEST FOR EXEMPTION: PHYSICAL INTERCONNECTION AT LOCAL SWITCH**

**TCC:** **Section 2.2 of Appendix Two**

“... Dominant Licensee must offer to allow traffic exchange to occur at the following POIs :

- Interconnect gateway switches
- Signalling transfer points
- **Local switches (line side and trunk side)**

- Justification:**
1. SingTel has offered physical interconnection at SingTel’s four (4) Interconnection Gateway Switches (IGSs). SingTel submits that this would be comprehensive enough to facilitate the conveyance of calls from and to the whole of SingTel Network and enable the Requesting Licensees to seek call origination service or call termination service from the SingTel Network.
  2. SingTel is unable to provide physical interconnection at its local switches (line side and trunk side) due to technical constraints. All the local switches have been designed for connection to subscribers either on direct exchange lines or ISDN interfaces. They have not been equipped with the necessary charging capability, signalling screening features nor hardware resources such as signalling or digital trunk cards for connection to other operators’ network. In fact, over 75% of SingTel’s local switches are not designed to handle the charging regime required for interconnection. In addition, the implementation of the interconnect charging regime will adversely affect the call handling capacity of these local switches.
  3. Further, SingTel has provided added signalling security features to discard illegal and unrecognized signalling messages at its IGSs. However, these signalling security features are not available at the Local switches and this would pose as a potential threat to SingTel’s network stability and reliability if erroneous signalling messages are sent by other networks. Without the signalling security features, the local switches are susceptible to failure if invalid or erroneous messages or parameters are received.
  4. In light of the above, SingTel seeks exemption from iDA on the requirement to physically interconnect at the local switches (line side and trunk side).

**(3) REQUEST FOR EXEMPTION: POINT OF ACCESS (POA) AT EXCHANGE CABLE VAULT**

**TCC: Section 2.5 of Appendix Two**

“A Dominant Licensee must also offer to provide Facilities-based Licensees access to ESF and UNE at the following POA (when controlled by the Dominant Licensee) :

- ...
- **Exchange cable vault**
- ...

- Justification:**
1. SingTel has offered co-location space in SingTel’s exchanges in the Reference Interconnection Offer for the Requesting Licensees to access to ESF and UNE through the respective schedules (schedule 8). SingTel facilitates the access through the pulling of the Requesting Licensee’s fibre cable from the lead-in manhole, via the exchange cable vault and terminating at the Requesting Licensee’s equipment at the Co-Location Space. SingTel shall also install and terminate the Requesting Licensee’s sub-loop tie-cable (POA) or transmission tie-cable (POI) as described in the respective schedules in the provisioning of co-location space at SingTel’s exchange building. As such, there will not be a necessity for the Requesting Licensee to co-locate at SingTel’s exchange cable vault, nor access to any ESF or UNE at the SingTel’s cable vault.
  2. In addition, the exchange cable vault is not suitable for housing any equipment due to the following reasons:
    - The exchange cable vault is susceptible to flooding
    - Power supply is not available.
    - Humidity is high.
  3. In light of the above, SingTel seeks exemption from iDA on the requirement to provide POA at Exchange cable vault.

(4) **REQUEST FOR EXEMPTION: POINT OF ACCESS (POA) AT BUILDING EQUIPMENT ROOM**

**TCC:** **Section 2.5 of Appendix Two**

“A Dominant Licensee must also offer to provide Facilities-based Licensees access to ESF and UNE at the following POA (when controlled by the Dominant Licensee) :

- ...
- **Building equipment room**
- ...

- Justification:**
1. SingTel submits that this requirement is unnecessary as the roles and responsibilities of building owners are stipulated in the iDA Code of Practice for Info-Communication Facilities In Building (COP-IF) 2000.
  2. In view of the above, SingTel seeks exemption from iDA on the requirement to provide POA at building equipment room.

**(5) REQUEST FOR EXEMPTION: DISTRIBUTION FRAME ACCESS AT ROADSIDE CABINETS**

**TCC: Section 5.3.4 of Appendix Two**

Distribution Frame Access – exchange MDF, building MDF and roadside cabinets

- Justification:**
1. SingTel seeks iDA's exemption on the requirement to provide access to distribution frames at the roadside cabinets. SingTel has offered access to local loop from SingTel's exchanges and the building MDF, and this would enable any Requesting Licensee to lease local loop from SingTel to any part of Singapore where capacity is available.
  2. SingTel submits that access to distribution frames at the roadside cabinets should be exempted for the following reasons:
    - **Recovery Programme:** There are currently only 200 roadside cabinets available, and they will eventually be recovered.
    - **Space Limitations:** Roadside cabinets have very limited space to erect frames or house equipment. They are typically not designed to allow multiple operators to house equipment within.
    - **Limited Local Loops:** The capacity of distribution frames is limited, and SingTel is not able to expand the number of frames due to limited space. The number of local loops available at each of these roadside cabinets is also small, which makes it uneconomical for any requesting licensee to seek access at the roadside cabinet.
    - **Power Supply:** Roadside cabinets are not equipped with power supply nor air-conditioning and therefore are not suitable for any active equipment, such as multiplexers or modems including DSLAMs.
  3. In view of the above, SingTel seeks exemption from iDA on the requirement to provide distribution frame access at roadside cabinets.

(6) **REQUEST FOR EXEMPTION: VIRTUAL (DISTANT) CO-LOCATION AT SINGTEL EXCHANGE BUILDINGS**

**TCC:** **Section 5.3.2 (j) and 5.3.5.5.1**

“... the situations in which **virtual (distant) co-location** will be required and the prices, terms, and conditions under which **virtual co-location** will be provided.”

“... If physical co-location is not feasible, due to actual space constraints or technical or operational considerations, the Dominant Licensee must allow **virtual (distant) co-location, ...**”

- Justification:**
1. SingTel has offered in its Reference Interconnection Offer (RIO) space at SingTel’s exchange buildings for the Facility-Based Requesting Licensees to physically co-locate its equipment to access to SingTel’s ESF and UNE. As audited by the iDA, space at the exchanges listed in the SingTel’s RIO are available. There is therefore no necessity to offer virtual co-location since space is not a constraint.
  2. Where physical co-location is not possible due to technical or operational constraints other than space such as unsafe MDF frame structure, congested jumper fields, etc, then providing virtual co-location would not be able to address nor overcome the constraints.
  3. In view of the above, SingTel seeks exemption from iDA on the requirement to provide virtual (distant) co-location in the RIO.

**(7) REQUEST FOR EXEMPTION: SPECTRUM MANAGEMENT AND DEPLOYMENT PLAN**

**TCC: Section 5.3.3.4 of Appendix 2**

“Facilities-based Requesting Licensees must adhere to a spectrum management and deployment plan that will be developed by the Dominant Licensee and approved by the iDA ...”

- Justification:**
1. SingTel is currently studying the spectrum management plans as being developed in other jurisdiction. As this is a new era and technologies in which most telecommunication bodies are entering, SingTel requires more time to develop this management plan.
  2. In view of the above, SingTel seeks a three (3) months temporary exemption from iDA on the requirement to provide the spectrum management plan to the iDA for approval.



**(8) REQUEST FOR EXEMPTION: 1800/1900 NUMBER PORTABILITY**

**TCC:**

**Section 5.3.2(g)**

“a description of the means by which the Dominant Licensee will work with the Requesting Licensee to enable its End User to keep their current telephone numbers or network address if they switch to the telecommunication services provided by the Requesting Licensee;”

**Justification:**

1. SingTel notes that there is no suitable technical solution currently available to allow the porting of 1-800 and 1-900 numbers in a multi-operator environment. SingTel notes that the Authority has initiated a first forum on Number Portability and SingTel will be participating with a view to developing a solution. SingTel suggests that the new portability solutions for the porting of 1-800 and 1-900 numbers could be incorporated into the RIO at a later stage when the details of the solution are known.
2. In view of the above, SingTel seeks a temporary exemption from iDA on the requirement to provide incorporate 1800/1900 number portability in the RIO.

**(9) REQUEST FOR EXEMPTION: FACILITIES-BASED REQUESTING LICENSEE WITH THE ABILITY TO PHYSICALLY INSPECT LOCATION**

**TCC: Section 5.3.5.5.2**

“... Upon request, the Dominant Licensee must allow the Facilities-based Requesting Licensee to physically inspect any location at which the Dominant Licensee claims space is not available for co-location.

- Justification:**
1. In Section 5.3.5.5.2 of the TCC, SingTel is already required to verify to IDA's satisfaction that SingTel has taken reasonable measures to provide adequate space. Where actual space constraints exist, SingTel must also take reasonable measures to upgrade its facilities to allow co-location of additional equipment. In the verification to the IDA, SingTel will be required to demonstrate that currently unused space is required for its projected growth over a two (2) year period as described in Section 5.3.5.5.3. Through this process, IDA being an objective and impartial institution would have determined whether SingTel has any space for co-location.
  2. Allowing the Requesting Licensee the right to physically inspect the site serves no purpose and would unnecessarily expose SingTel to different standards of assessing the availability of space and thus cause unwarranted disputes. The provision would cause unnecessary disputes, work and burden to all Licensees and iDA.
  3. In light of the above, SingTel submits that the process to verify with iDA provides sufficient protection to Facilities-based Requesting Licensees. The provision for Facilities-based Requesting Licensees to inspect the site is unnecessary and its removal would not compromise the effective competition amongst Licensees.