IN THE MATTER OF UNDERTAKINGS DATED 22 MARCH 2006 PROVIDED BY TELSTRA CORPORATION LIMITED TO THE AUSTRALIAN COMPETITION AND CONSUMER COMMISSION IN RESPECT OF PSTN ORIGINATING AND TERMINATING ACCESS AND LCS ("the Access Undertakings")

## STATEMENT OF [c-i-c]

On 13 September 2006, I, [c-i-c] of [c-i-c], state as follows:

- The information in this statement is confidential to Telstra Corporation Limited ("Telstra"). I have prepared this statement on the basis that the information in it and in the documents attached to it will remain confidential and that the information and documents will only be disclosed to a person:
  - (a) who has executed a confidentiality undertaking in terms that are satisfactory to Telstra; and
  - (b) who may only use the documents and the information for the following purposes:
    - making submissions to the Australian Competition and Consumer
      Commission ("ACCC") in respect of the Access Undertakings; or
    - (ii) any application made to the Australian Competition Tribunal under s
      152E of the TPA for review of a decision made by the ACCC in respect
      of any of the Access Undertakings; or
    - (iii) any other purpose approved by Telstra in writing.

### A EXPERIENCE

2. [c-i-c]

# **B** PRICE ESCALATORS USED TO REVALUE ASSETS AND ANNUALISE CAPITAL COSTS

3. I have been asked to calculate the asset specific price escalators for the following asset categories:

- Radio Transmission;
- Optical Fibre;
- SDH Equipment;
- Local Switching;
- LAS Software;
- Signalling Transfer Point;
- Transit Switching;
- TNS Software;
- Main Conduit & Trenching;
- Pair Gain Systems.
- 4. To be useful in the total service long run incremental costs ("TSLRIC") context, the asset specific price escalators listed in paragraph 3 above must reflect the cost trend of the underlying materials, inputs and labour costs associated with construction and operationalisation of the relevant assets. The escalators based on ABS national accounts data on the capital stock employed in the communications services sector automatically include all these cost components. The calculations involved in this approach are detailed in section D. Some escalators, those based on the CCA information, are constructed using a combination of labour and materials sub-indices. The calculations involved in this approach are described at section C below. The sub-indices reflect the movement over time of each of the price of relevant labour and the price of relevant materials respectively. This construct is appropriate because the asset valuations appropriate for the TSLRIC approach need to incorporate both the cost of acquiring the necessary equipment, components and materials but also the costs involved in constructing and operationalising the relevant assets.

### C PRICE ESCALATORS RELIANT ON DATA DERIVED FROM CCA

# **Materials indices**

- For the purpose of calculating the materials component of the network asset price escalators, I used data from the Telstra Current Cost Accounts ("CCA") prepared under Limb 1 of Accounting Separation. [c-i-c]
- 6. The price indices calculated [c-i-c] for the network assets for the purpose of the CCA are made up of a separate materials component and a separate labour component.
- 7. The CCA indices were calculated [c-i-c] for those assets where more direct and specific price information was not readily available for certain assets. The CCA data provided materials indices up to and including 2004-05 ("the CCA material indices").
- 8. I was not involved in the calculation of the CCA materials indices but I have been provided with summary sheets [c-i-c] which outline the steps involved in the calculation of the indices. Those summary sheets identify that the calculation of the CCA materials indices was directly based on indices compiled and provided by the Australian Bureau of Statistics ("ABS").
- 9. The ABS price index series for prices of plastic extruded product manufacturing were used to calculate the CCA materials indices for "main conduit and trenching".
- 10. The ABS price index series for prices of import telecommunications and sound recording equipment were used to calculate CCA materials indices for "pair gains systems".
- 11. I used the CCA materials indices as the materials component of the price indices for the above asset categories. The materials indices applied are set out in Attachment 1 to this statement.
- 12. The purpose behind the compilation and development of these indices in the CCA context is to convert historical cost asset valuations into an estimate of current replacement cost. The current replacement cost of these network assets would include costs associated with both the purchase of the relevant equipment, materials and components as well as the labour costs involved in the construction and operationalisation of these assets. In my view this is the same purpose for the application of the escalators in the TSLRIC approach. In the TSLRIC modelling the escalators are used to convert historical asset valuations to contemporary estimates of current replacement cost. In this TSLRIC context the

contemporary asset valuations specifically need to capture the impact of all factors that influence asset valuations including materials and input costs as well as relevant labour costs. Given the similarity of purpose, the CCA materials indices are, in my view, relevant and useful in the TSLRIC context.

13. In my view the materials indices applied in the CCA context are reasonable proxies for the prices of relevant equipment and materials used in the construction and operationalisation of the assets relevant in the Public Switched Telephone Network ("PSTN") Originating Terminating Access ("OTA") and Local Call Service ("LCS") context. I am not aware of any better indices that are likely to be more representative of the prices of these network assets.

#### Price indices for labour

- 14. The labour price indices used for the purpose of calculating the CCA price indices for the network assets were based on various measures of average weekly ordinary time earnings ("AWOTE") published by the ABS. The particular wage indices applied in the CCA context were chosen to match as closely as possible the type of labour relevant for the particular asset involved.
- 15. The AWOTE data used to calculate the CCA labour indices for "main conduit & trenching" was AWOTE data for construction plant operators.
- 16. The AWOTE data used to calculate the CCA labour indices for "pair gain systems" was AWOTE data for electronic instruments tradespersons.
- 17. AWOTE data reflects changes to average earnings levels as result of at least two factors:
  - (a) changes in underlying earnings; and
  - (b) changes in the composition of the work force.

For example, if a large number of low-income workers exit a particular workforce, the measured AWOTE will rise, even if there was no actual increase in the underlying earnings of any individual employee. For this reason economists generally regard the AWOTE measure as distorted. In my view wage movements due to compositional wage shifts such as those in the example above are not relevant in a TSLRIC costing context.

- 18. The ABS publishes another series of wage measures, collectively known as the wage price index ("WPI"), which are specifically constructed to examine wage movements in a stable cohort of employees. Therefore, the WPI is not affected by compositional shifts in employment and is consequently a less distorted measure of the underlying wage movements. It is for this reason that, for the purpose of TSLRIC costing, I consider the WPI published by the ABS to be a more reliable measure of the underlying wage movements in various industries.
- 19. I have therefore used the WPI for the construction sector as the wage escalator for the labour component of the "main conduit and trenching". This is because the type of labour relevant in this context is essentially related to construction of these network assets. Thus movements in earnings in the construction sector are a better guide to earnings movements relevant in such construction.
- 20. I have used the overall WPI (ie the economy-wide measure inclusive of all industries) as the wage escalator for the labour component of the "pair gain systems" price indices. This is simply a broad wage measure. Alternatively, if the WPI for the communications services sector was used (on the basis that the employment involved in this activity is essentially undertaken by employees of Telstra and therefore the relevant wages are more likely to move with those of employees in the communications services sector) the calculated escalator for wages would be slightly lower in 3-year compound average growth terms.
- 21. I sourced the WPI data directly from the ABS website and the data is reproduced in attachment 1 to this statement.

#### Weighting of Labour and Materials Price Indices

- 22. The foregoing provides the details of the separate labour and materials indices used for the purpose of calculating the price escalators for the "main conduit and trenching" and the "pair gain systems" assets.
- 23. The separate indices for labour and materials need to be combined in a way that is consistent with their relative usage in the construction and operationalisation of each of the network assets. In other words, the weights that are used to combine specific materials and wage indices should reflect the mix of labour and materials employed in the construction and operationalisation of each of the network assets.

24. [c-i-c] the weights applied to the labour and materials inputs in the CCA context were constructed by monitoring relevant (ie mainly Customer access network-based construction) projects over a number of consecutive 6-month periods. Information was captured on the amount of materials and labour employed across each 6-month period and was used to construct weights. In the CCA context these weights were updated annually and then applied to all historical periods to construct the asset specific index. The weights applied in the latest CCA analysis relate to the 2002-03, 2003-04 and 2004-05 financial years. The weights applied are summarised in the table below.

Price indices	Labour	Material
Main conduit & trenching	[c-i-c]	[c-i-c]
Pair gain systems	[c-i-c]	[c-i-c]

- 25. As far as I am aware there is no other method for deriving weights for the purpose of calculating price indices for these assets in both the CCA and TSLRIC costing contexts. Consequently, I consider that the weights used in the CCA process are the best available weighting structure for application in the TSLRIC costing context.
- 26. I have applied the weights set out at paragraph 24 to the CCA materials indices and the ABS WPI data for labour to determine asset price escalators. In other words, the annual increase in the relevant WPI multiplied by the labour weight was added to the annual increase in the relevant materials price index multiplied by the materials weight. In this manner I determined a weighted price index being a growth rate on the previous year.
- I constructed the asset price escalators back to 1998-99. However, in determining the relevant price indices to apply in the TSLRIC costing context, I have applied the compound average growth rate ("CAGR") over the last 3 years (i.e. 2002/03, 2003/04 and 2004/05). The rationale for applying a compound average is two-fold:
  - (a) first, to smooth some of the year to year volatility in the estimated annual price movements for the network assets; and
  - (b) secondly, to reflect recent information about price movements which would be partially neutralised if a long-duration time series of annual changes were included in the CAGR process. In other words, older estimates of asset price inflation may provide no useful information on recent rates or the expected

inflation over the life of the network assets necessary for the annualisation calculations.

28. The 3 year CAGRs calculated are set out at Attachment 1.

## **D** PRICE TRENDS BASED ON ABS INFORMATION

- 29. I have not relied on CCA information for the other asset categories listed at paragraph 3. Instead these escalators have simply been based on information contained in the national accounts data published by the ABS.
- 30. In order to estimate the price trend of these assets I used ABS data on capital stock employed by the communications services sector. The ABS data specifically identifies capital stock used by the communications services sector in four separate categories. I have used the "electrical and electronic equipment" category, the "other machinery and equipment" category and the "computer software" category. The mapping between the asset categories and the relevant ABS derived capital stock prices indices is summarised in the table below:

Asset category	ABS constructed price index	
Optical fibre	Electrical & electronic equipment	
SDH equipment	Electrical & electronic equipment	
Local switching	Electrical & electronic equipment	
Signalling transfer point	Electrical & electronic equipment	
Transit switching	Electrical & electronic equipment	
Radio transmission	Other machinery & equipment	
LAS software	Computer software	
TNS software	Computer software	

31. I sourced the relevant data directly from the ABS using their Ausstats service (operative at the time but no longer available given the ABS no longer charges for standard data and

publications). The ABS capital stock data reflects the full cost of constructing, initialising and operationalising the relevant assets. As such, the impact of labour costs are essentially capitalised into relevant capital expenditure and ultimately capital stock estimates and therefore are captured in the calculated price index. This is in contrast to the price indices discussed in section B where the labour price trend is compounded with the materials price trend to derive the network asset price trend. This is necessary because the materials indices applied in the CCA context do not capture the labour costs associated with constructing, installing and operationalising the relevant assets. Consequently, the labour costs must be specifically and separately captured to derive escalators for the network assets.

- 32. The data on capital stock employed by the communications services sector enables the calculation of implicit price trends for the assets listed in the table at paragraph 30. A price trend based on capital stock would be an appropriate price trend estimate for these assets in a TSLRIC context.
- 33. The ABS definition of the "communications services sector" includes telecommunications services, postal services and courier services. Nevertheless, given the relative size of the telecommunications services sub-sector in the overall communications services sector, the price trend for computer software used by the communications services sector is a reliable indicator of the price trend for computer software used by the telecommunications sub-sector.
- 34. I am not aware of any other price indices for these assets that is specifically focused on the prices of assets used by the communications services sector. Moreover, I have no information which would suggest that the price trend derived for capital stock used by the overall communications services sector is not a reliable estimate for the price trend for the relevant assets used in the provision of PSTN OTA and LCS.
- 35. In order to estimate the price trend for these assets used by the communications sector, I collated data on net capital stock of these asset categories employed in the communications services sector in both nominal and constant price terms the for the period June 1983 to June 2004.
- 36. I attach a summary of the ABS data I used to construct escalators for the network components in Attachment 2 to this statement. Attachment 3 provides the data used to construct escalators relevant to software.

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- 37. I then calculated price trends for the relevant asset categories using the ABS data. I performed those calculations as follows:
  - I divided the nominal value of the capital stock of electrical & electronic equipment employed each year in the communications services sector by the constant price (or real) value of the capital stock of electrical & electronic equipment employed by the communications services sector in that year. Across time this provided a time series of implicit prices of the capital stock of electrical & electrical & electronic
  - (b) I divided the nominal value of the capital stock of other machinery & equipment employed each year in the communications services sector by the constant price (or real) value of the capital stock of other machinery & equipment employed by the communications services sector in that year. Across time this provided a time series of implicit prices of the capital stock of other machinery & equipment used by the communications services sector;
  - I divided the nominal value of the capital stock of computer software employed each year in the communications services sector by the constant price (or real) value of the capital stock of computer software employed by the communications services sector in that year. Across time this provided a time series of implicit prices of computer software used by the communications services sector;
- 38. The ABS data specifically accounts for increasing software capability in compiling the constant price series of software capital stock. The ABS facilitates this by allowing for the capability of computers/software across time in the constant price estimates of capital stock of and capital expenditures on software. Thus the constructed price deflator will also explicitly account for any increased capability of the software and capture increased capability as an effective reduction in price (assuming no actual change in price).
- 39. The data shows that the nominal prices of electrical and electronic equipment used by the communications services sector have been falling steadily by approximately 10.0% per annum over the last 3 years.
- 40. The data shows that the nominal prices of other machinery & equipment used by the communications services sector have risen by approximately 0.1% per annum over the last 3 years.

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41. The data shows that the nominal prices of computer software used by the communications services sector have been falling steadily over the last decade and has averaged around 6.9% over the last 3 years.

**DATED**: 13 September 2006

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[c-i-c]

Attachment 1-3 [C-I-C]

