

**IN THE MATTER OF UNDERTAKING  
DATED 22 MARCH 2006 LODGED BY  
TELSTRA CORPORATION LIMITED  
WITH THE AUSTRALIAN COMPETITION  
AND CONSUMER COMMISSION IN  
RESPECT OF PSTN ORIGINATING AND  
TERMINATING ACCESS AND LOCAL  
CARRIAGE SERVICE (“LCS”)  
 (“the Access Undertaking”)**

**STATEMENT OF [C-I-C]**

On 27 September 2006, I, [c-i-c] of [c-i-c], state as follows:

- 1 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 will remain confidential and that the information 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 information for the following purposes:
    - (i) making submissions to the Australian Competition and Consumer Commission (“ACCC”) in respect of the Access Undertaking; or
    - (ii) any application made to the Australian Competition Tribunal under s 152E of the Trade Practices Act for review of a decision made by the ACCC in respect of the Access Undertaking; or
    - (iii) any other purpose approved by Telstra in writing.

**Background**

2 I have been employed by Telstra since 1982, [c-i-c].

3 [c-i-c]

**Forecasting within Telstra**

- 4 Forecasting within Telstra is generally carried out quarterly. Each quarterly forecast is prepared for the next three year period.
- 5 The centralised internet based system used for Telstra's quarterly forecasting processes is the Telstra Forecasting System ("TELFOR"). The key output from TELFOR is the Physical Target Packages ("PTP").
- 6 The PTP are the primary reports from TELFOR containing volume forecasting for Telstra products. The PTP covers a range of products and metrics, including Services in Operation ("SIO"), number of connections during a particular period, number of disconnections during that period, number of calls, minutes of use ("MOU") associated with particular call types, the bandwidth for various data services and a range of other metrics. Products for which forecasting is carried out and reported in the PTP include calls on the PSTN (eg local and long distance), ISDN, mobile calls and data services.
- 7 The Quarter 4 2004/05 PTP was generated by TELFOR.
- 8 I set out in this statement a summary of the methodology used by Telstra's staff to forecast key traffic volumes which are contained in the PTP. In this statement, I first describe the process for forecasting the number of Basic Access SIOs, and then the process for forecasting call volumes to be carried on those SIOs. The process for forecasting call volumes is the same for local calls, local carriage service ("LCS") (which is a subset of local calls), Subscriber Trunk Dialing ("STD", or national long distance calls), fixed to mobile ("FTM") and International Direct Dialing ("IDD"). Dial up internet calls and minutes are a sub-set of local calls. Forecasting for PSTN Originating and Terminating Access is not carried out by my team, [c-i-c].
- 9 The forecasting methods described in this statement were in part developed with the assistance of the Monash University Department of Econometrics. The forecasting team at Telstra includes staff with post graduate qualifications in econometrics.

### **Basic Access SIOs**

- 10 The starting point for forecasting the number of Basic Access SIOs is the actual number of Basic Access SIOs which were connected at the end of the previous quarter. The next step is to forecast how many connections and disconnections will

occur in each month of the relevant forecast period. These are then added to or subtracted from the starting number of Basic Access SIOs, to provide the forecast number of SIOs in the forecast period.

- 11 The process of forecasting connections and disconnections involves, in essence, a two step process. First, a “base forecast” is developed, using trends derived from historical data of actual connections and disconnections. As a second step, anticipated connections or disconnections which are expected to result from Telstra initiatives, competitor behaviour and other factors due to take place during the forecast period, *and* which are expected to lead to a *change* to the historical trend shown by the historical data, are then added or subtracted from the base forecasts, as appropriate.
- 12 I address each of these steps in turn.

***Step 1: Creation of base forecasts***

- 13 The base forecasts of new connections and disconnections are derived from historical data stored within Telstra’s databases, and the number of working days in the year. For the Q4, 2004/05 forecast, a forecasting technique, referred to in this statement as the arithmetical method was used to create the base forecasts for Basic Access SIOs.
- 14 The arithmetic method forecasts connections and disconnections based on the actual levels of connections and disconnections experienced in recent years, adjusted according to the number of working days in the year. Generally the past three years’ data of actual connections and disconnections is used (other than if it is considered that a particular year is not representative or was influenced by an extraordinary event which would distort the forecasting process). The number of connections and disconnections for a particular year is divided by the number of working days in that year. These are then averaged to give an average number of connections and disconnections per working day. Those figures are then multiplied by the number of working days in the forecast year under consideration, to give a forecast number of connections and disconnections for that year.

***Step 2: any further connections/disconnections expected during forecast period?***

- 15 As noted above, once the base forecasts have been established, an assessment will be made of whether there are any events or initiatives planned during the forecast period which mean that further connections or disconnections should be added to or subtracted from, as the case may be, the base forecasts. Because the historical actual data will already implicitly allow for factors such as growth in new housing, new commercial building, customers switching from other carriers to Telstra, people moving house and second telephone line campaigns (in the context of connections), cancellations of service due to product migrations and substitutions (eg to mobile phone use), migration to competitors and people moving house (in the context of disconnections), further connections/disconnections from such factors are only taken into account if it is considered that they will result in a *change* to the trend which is already implicit in the historical data. This is a decision based on experience and judgment, rather than on any statistical process.
- 16 The information upon which the assessment of whether any change to the trend demonstrated by the base forecast is likely to occur during the forecast period is provided by Business Units within Telstra, who have the most detailed information on or knowledge of what activities or events are likely to occur in the forecast period under consideration, and which may impact on the number of Basic Access SIOs.
- 17 For example, one matter that may be taken into account is the impact of the Unconditioned Local Loop Service (“ULLS”). ULLS allows other service carriage providers direct access to households and businesses using Telstra’s communication wires. Any surge in the uptake of ULLS would result in an increase in the levels of disconnections over and above what had been forecast in the base forecast. The number of further disconnections anticipated to occur during the forecast period as a result of the ULLS would therefore need to be subtracted from the base forecast of SIOs. Telstra Wholesale, being the Telstra Business Unit with the closest exposure to the impact of ULLS, provides my team with information on their estimate of future incremental Basic Access cancellations due to the ULLS.
- 18 Information from other Business Units is also taken into account and SIOs added to or subtracted from the base forecasts where appropriate. For example, information might be provided to us as to cabling of large new real estate developments,

campaigns to promote the uptake of second telephone lines and new business initiatives planned for the forecast period in question.

- 19 The end product of this “two step” process is a forecast of Basic Access SIOs. The forecast figures in the 2004/05, Q4 PTP are a result of this forecasting process.
- 20 In quarter 4, 2004/05 forecast, there were additions and subtractions made at the second step of the forecasting process, predominantly subtractions to take into account assumptions concerning forecast uptake of ULLS. I discuss the assumptions made in the Q4 2004/05 PTP further at paragraphs 44-51 below.

### **Volumes of calls**

- 21 In order to forecast the number of calls and minutes which are likely to be made in respect of various products, my staff start with the most recent data of actual call numbers and minutes - by product - made per SIO. Data from several previous years is used as the starting point for forecasting volumes of calls. The historical data is expressed on a monthly basis. The time period over which historical monthly data will be drawn will vary from product to product, but is generally taken from the previous three to five years. The number of previous years to be used is chosen to ensure “representative” years are used which are not influenced by abnormal events. Using this data and the process described in paragraph 22 below, calls per average SIO (“ASIO”) per day are calculated, on a product by product basis.
- 22 ASIO is calculated by averaging SIOs over a monthly period, to eliminate the distortion in calls per SIO that would occur if end of month SIO only were used, and if SIO were growing or declining over that period. Then the actual call data for the last few years, as discussed at paragraph 21 above, for each product being considered is used to calculate “calls (and/or minutes) per ASIO per day” for that product. This call data is split into residential calls and business calls. For calculating calls (and/or minutes) per ASIO per day, calendar days per month are used for residential calls, and business days per month for business calls.
- 23 Through the process described at paragraphs 21 and 22 above, a series of actual “calls per ASIO per day” (on a product by product basis, residential and business) is available going back in time on a month by month basis.

- 24 The data on calls per ASIO per day are then combined into a regression analysis with two other variables. Regression analysis is a statistical technique that can be used to develop a mathematical equation representing the relationship between a “dependent” variable and one or more “independent” variables. By “dependent” variable, I mean the metric, or variable, being forecast by the equation. “Independent” variables are metrics or variables that are considered to have, and will continue to have, a relationship with the dependent variable. If it is understood how the dependent variable is related to the independent variables, and if forecasts are available for the independent variables, those forecasts can then be used to develop a forecast for the dependent variable. Thus, for example, if historical data is available for variables A, B and C, the relationship of dependent variable C to independent variables A and B can, through the regression equation, be defined and measured. Once that relationship has been established, and if forecasts for both variables A and B are available, they can be used to develop a forecast for variable C, through the known relationship between the three variables.
- 25 The data on calls per ASIO per day is the dependent variable in this regression analysis. The “independent” variables are total mobile phone services in operation in the market and seasonality, for example, Christmas, Easter and other vacations. The regression formula takes account of these variables given:
- (a) the number of mobile phone services is having a downward effect on PSTN local, STD and IDD calling, due to substitution of fixed line calling to the use of mobile phones; and
  - (b) fewer business calls will be made during statutory holidays, STD calls will increase on, for example, Mother’s Day, and in the month of February there are three fewer days in which calls can be made when compared to a month with 31 days.
- 26 The relationship between the three variables is established through the regression analysis. The actual regression equation is the same for all products, but the historical relationship between the three variables will be different, depending on the product being considered. In other words, different products will react differently - and therefore have a different relationship - to the independent variables.

- 27 Once the relationship between the three variables has been established through the regression equation, the forecasts for the two independent variables are used to create forecasts for the dependant variable, in this case, calls per ASIO per day. Forecasts are available for mobile SIOs and seasonality.
- 28 Forecasts for mobile SIOs are provided to those in my team responsible for PSTN forecasting by [c-i-c]. I am aware of the process for forecasting mobile SIOs.
- 29 The mobile SIO forecast is based on historical data of Telstra mobile SIOs, and competitors' mobile SIOs, the numbers of which are published in competitors' publicly available quarterly or half yearly financial results announcements (the frequency depending on the carrier concerned).
- 30 As a first step, the trend, or base forecast, of Telstra mobile SIO growth is established, on the basis of trends determined from the Telstra historical data. As a second step, assumptions are made as to total mobile market share going forward, based on the historical data of competitors' mobile SIOs as compared to Telstra's mobile SIOs. Assumptions concerning planned Telstra and competitor activities and promotions in the period being forecast, and which are considered likely to have an effect on market growth or market share, are also taken into account at this stage.
- 31 The process described at paragraph 30 above enables a forecast of total Telstra mobile SIOs to be made, and from that Telstra forecast, a forecast of total mobile SIOs in the market going forward.
- 32 From the historical data of mobile SIOs, it is known that there are approximately [c-i-c] mobile SIOs as at the end of 2005/06 ([c-i-c]). Mobile SIOs are closely related to the number of people in Australia, as compared to Basic Access SIOs, for example, which are more related to the number of dwellings in Australia. Given the number of mobile SIOs is reaching the population level, it is expected that historical rates of mobile SIO growth will slow as market saturation is reached.
- 33 The other variable referred to above, seasonality, is relatively easy to forecast. This is because seasonality is based on future calendar days - working and weekends - which are known. Differences such as leap years and on what days statutory holidays will fall in the future, will be factored into the forecast seasonality.

- 34 Once forecast calls and minutes per ASIO, per day, have been established through this process for a particular product, this forecast is applied to the forecast Basic Access SIO (forecast by the method discussed at paragraphs 10 to 20 above). This will give a total number of forecast calls for that product over the relevant forecast period. So, for example, to forecast the number of local calls to be made in September 2007, the number of local calls per ASIO, per day, for that month are multiplied by the average number of SIOs forecast for that month. This is then multiplied by the number of days in that month (calendar days or business days, as appropriate to the call type being forecast), to arrive at the total number of forecast local calls in that month.
- 35 Finally, and similar to the process explained above in respect of Basic Access SIOs, any factors that will involve a change to the trend of call volumes expected during the particular forecast period in question are added to or subtracted from the call volume forecast. For example, if a particular call discount initiative is planned to take place during the forecast period being considered, the relevant Business Unit would provide information as to the expected increase in call volumes as a result of that initiative. This increase would need to be added to the call volumes forecast, to arrive at a total number of forecast calls in the forecast period.
- 36 As noted at the outset, dial up internet calls are forecast as a subset of local calls - dial up access being made through a local call being carried on the PSTN. From the historical data of actual local calls, the average actual holding time of all local calls is known, as well as holding times of dial up and voice calls. Through this, the forecast local call volumes can be broken down into forecast local voice and data calls.
- 37 The above forecasting I have described for call volumes and minutes of use forecasts were the methods used in the Q4 2004/05 PTP forecasts.
- 38 Once the forecasting has been completed, it is distributed to Product Business Unit, Finance Business Unit and other Business Units for comment and approval. After any comments from the Product, Finance and Business Units have been taken into account, the forecast is then loaded into TELFOR, so that it can be used in various reports, including, as noted above, the PTP.

### **Fixed to mobile**



- 39 I have been provided with an extract from the Vodafone Submission to Telstra's Undertaking for PSTN Originating and Terminating and LCS Access Services ("**Vodafone Submission**") which comments as follows:

*"In relation to the PSTN and mobile call traffic, Telstra does not present figures for mobile to fixed calls alone. Instead Telstra estimates a 2.4% decrease from 2006-07 to 2007-08 for fixed to mobile and mobile to fixed calls. However, Telstra's half yearly financial statement shows that fixed to mobile minutes increased by 1.3 per cent based on the volume of minutes Telstra experienced from 31 December 2004 to 31 December 2005. No information is provided in this report on the number of mobile to fixed minutes Telstra terminates."*

- 40 The PTP does not contain a separate line item or forecast for mobile to fixed (PSTN) calls ("**MTF**"). The PTP does contain a line item or forecast for FTM.
- 41 In my view, there is no meaningful basis upon which to compare actual results from one year as against forecasts which relate to some number of years into the future. Telstra's forecasting, as I have explained in this Statement, is based on a set of assumptions and the application of judgment as to what growth, or decline, may ultimately occur in those future years. Moreover, the actual results referred to by Vodafone were not known at the time the Q4, 2004/05 PTP was prepared.
- 42 The Q4, 2004/05 PTP shows a decline in retail fixed to mobile minutes as between 2006/07 and 2007/08. This was largely based on assumptions concerning declining numbers of SIOs over these years, due to factors such as mobile phone substitution and losses to competitors. As a result of the decline in the number of forecast SIOs, and despite the fact that FTM minutes per ASIO are forecast to grow as between 2006/07 and 2007/08 (though at a slower rate as compared to previous years), the total FTM minutes are forecast to decline. The December 2004 Telstra half yearly report shows that for the half year ending December 2004, FTM minutes growth was 5.1%. Accordingly, the 1.3% growth rate referred to in the December 2005 half yearly statement is reflective of the trends assumed in the Q4 2004/05 forecast.
- 43 I set out in the following paragraphs the key assumptions underlying the Q4, 2004/05 PTP forecasts for certain product types.

#### **Q4 2004/05 assumptions**

##### ***Basic Access***

- 44 One of the key foundations of the fixed line calling forecasts is the number of Telstra Basic Access SIOs. In short, less lines means less calls. The Q4, 2004/05 PTP forecasts were based on a starting point of SIOs of approximately 10.2 million at December 2004 (as shown in Telstra's December 2004 half year report). 1.98 million of these SIOs were wholesale. The Q4 2004/05 forecasts assumed that the number of Basic Access SIOs would decline by the end of 2007/08. The major factor assumed to lead to this reduction is an expected increase in ULLS SIOs by the end of 2007/08, most of which would substitute for Basic Access SIOs. Some new growth in Basic Access lines was assumed, due to new dwelling activity and new businesses, but this was assumed to be more than offset by cancellation of services due to mobile substitution and due to cancellation of lines associated with dial up internet usage.
- 45 It was assumed for the purpose of the forecasts that the number of dial up internet services would decline over the period to the end of 2007/08, due to broadband migration, and that some customers who were using a dedicated Basic Access line for their dial up access would cancel that line. It was also assumed that the penetration of fixed lines in homes and businesses would fall due to mobile substitution. Some customers, particularly single occupant households, were assumed to cancel their fixed line altogether and rely solely on mobile telephony, and some homes and businesses may keep a primary fixed line, but cancel second or third fixed lines in favour of mobiles.

### ***Local Calls and MOU***

- 46 As well as the flow through impact of fewer SIOs, the local calls forecast is dependent on the number of local calls per SIO. Telstra's half yearly report for December 2004 shows 4,412 million local calls associated with around 10.2 million Basic Access SIOs. From this, it can be calculated that there were approximately 432 local calls per service for that six month period, or approximately 860 calls per SIO per annum. That same half yearly report shows that local calls per SIO were 467 per service per six months the year before, so a decline in local calls per SIO was being experienced.
- 47 The Q4 2004/05 forecast assumed the number of local calls per service would continue to decline by the end of 2007/08, as a result of continuing mobile

substitution, and accelerating decline in dial up internet as customers migrate to broadband.

- 48 The Q4 2004/05 forecast assumed that the duration of the average local call would remain constant with current duration.

***National Long Distance (STD) MOU***

- 49 As well as the flow through impact of fewer SIOs, the STD minutes forecast is dependent on the number of MOU per SIO. Telstra's half yearly report for December 2004 shows 3,977 million STD MOU associated with approximately 10.2 million Basic Access SIOs. From this, it can be calculated that there were approximately 390 STD MOU per service for the six months to December 2004, or approximately 780 STD MOU per SIO per annum. That same half year report shows that STD minutes per SIO were approximately 420 for the six months ending December 2003, so a decline was being experienced in STD minutes per SIO. The Q4, 2004/05 forecast assumes MOU per SIO continue to decline by the end of 2007/08. The decline in calls per SIO is due assumptions concerning a number of influences, including increasing long distance preselection to other carriers, mobile substitution, email substitution, calling cards and Voice over IP (“VoIP”).

***FTM MOU***

- 50 As well as the flow through impact of fewer SIOs, the FTM minutes forecast is dependent on the number of MOU per SIO. Telstra's half yearly report for December 2004 shows 2,206 million FTM MOU associated with approximately 10.2 million Basic Access SIOs. FTM minutes are also generated from ISDN and CustomNet lines, but the overwhelming majority originate from Basic Access SIOs. From this, it can be calculated that there were approximately 216 FTM MOU per service for the six months to December 2004, or approximately 432 FTM MOU per SIO per annum. That same half yearly report shows that for the half year ending December 2003, there were approximately 203 minutes per SIO, so some growth was being experienced in MOU per SIO between then and the half year ending December 04. The Q4, 2004/05 forecast, as noted at paragraph 42 above, assumes that FTM MOU will grow per ASIO by 2007/08. This is driven primarily by forecast growth in the number of mobile services compared to

the level in 2004/05. However FTM MOU per ASIO growth will also be negatively affected by mobile substitution, due to an increasing number of mobile to mobile calls, and by increasing preselection to other carriers.

***IDD MOU***

51 As well as the flow through impact of fewer SIOs, the IDD minutes forecast is dependent on the number of MOU per SIO. Telstra's half yearly report for December 2004 shows 304 million IDD MOU associated with approximately 10.2 million Basic Access SIOs. This is an average of approximately 30 minutes per SIO for 6 months, or 60 minutes per annum. That same report shows that for the six months ending December 2003, IDD MOU per SIO was approximately 33 MOU, so a decline in IDD MOU per SIO was then being experienced. The Q4, 2004/05 forecast assumes that this decline will continue to 2007/08. The decline in IDD MOU per service is based on assumptions of increased usage of international calling cards, VoIP, email, mobile and SMS substitution.

**DATED:** 27 September 2006

.....  
[C-I-C]