Telstra's Supplementary Submission in Support of its Undertakings dated 14 November 2003

PUBLIC VERSION

Dated: 15 March 2004

A INTRODUCTION

1 On 14 November 2003, Telstra gave six undertakings ("**the Undertakings**") to the Australian Competition and Consumer Commission ("**Commission**") pursuant to section 152BS of the *Trade Practices Act* 1974 ("**the Act**") in respect of the following services:

(a) domestic PSTN originating and terminating access ("**PSTN OTA**") and local carriage service ("**LCS**"); and

(b) unbundled local loop service ("**ULLS**").

The Undertakings in relation to PSTN OTA and ULLS relate to the 2003/04, 2004/05 and 2005/06 financial years. The Undertakings in relation to LCS relate to the 2003/04 and 2004/05 financial years. The services the subject of the Undertakings are referred to together in this Submission as "**the UT Services**".

2 Amongst other things, Telstra relies upon its "*Further Submission in support of its Undertakings dated 2 December 2003*" (**"Further Submission"**), which sets out the reasons why the terms and conditions contained in the Undertakings are reasonable and therefore ought to be accepted by the Commission. The Further Submission annexed Telstra's "*Detailed Submission in support of its [9 January 2003] undertakings*" dated 31 July 2003 (**"Detailed Submission"**), which sets out in detail, the explanation for the WACC parameters and other inputs Telstra employed in its PIE II economic costing model.

3 On 23 December 2003, the Australian Competition Tribunal (**"Tribunal"**) published its decision following an application by GasNet (Australia) Operations Pty Ltd (**"GasNet"**) for a review of a decision by the Commission in relation to the access arrangement for the gas transmission system owned by GasNet[1] (**"the GasNet Decision"**).

4 On 10 December 2003, the Tribunal published its decision following an application by Epic Energy South Australia Pty Ltd (**"Epic"**) for a review of a decision by the Commission in relation to the access arrangement for the gas transmission system owned by Epic (**"the Epic Decision"**)[2].

5 This Submission sets out why the Tribunal's determinations in:

[1] *Application by GasNet Australia (Operations) Pty Ltd* [2003] AComp T 6 (23 December 2003).
[2] *Application by Epic Energy South Australia Pty Ltd* [2003] AComp T 5 (10 December 2003).

(a) the GasNet Decision in relation to the risk free rate; and

(b) the Epic and GasNet Decisions in relation to the choice of estimates in the absence of certainty,

warrant the Commission's reconsideration of certain views expressed in its *"Final Determination for Model Price Terms and Conditions of the PSTN, ULLS and LCS Services"* dated October 2003 (**"the Final Determination"**), and endorsed in its "*Assessment of Telstra's core services undertakings - preliminary view*" dated 12 December 2003 (**"Preliminary View"**) to the extent that such views will inform its assessment of the Undertakings.

B EXECUTIVE SUMMARY

6 Telstra submits that, for the reasons set out in this Submission, in conducting its assessment of the Undertakings, the Commission should align its views with those expressed by the Tribunal in the recent GasNet and Epic Decisions in relation to the WACC and the selection of estimates within an uncertain range.

7 In particular, with respect to the WACC, the Commission should adopt the 10-year Government bonds as the most appropriate investment in determining the risk free rate when calculating the WACC.

8 In scenarios involving assessment of uncertain estimates (such as those made in the context of the Undertakings, for example in relation to ULLS demand), the Commission should not:

(a) select the lowest estimate within a possible range of reasonable options;

(b) reject an estimate provided by Telstra where it falls within a range of possible choices which are reasonable, taking into account the matters set out in section 152AH of the Act.

9 Telstra further notes that it does not accept the Commission's position in relation to equity issuance costs.

10 These matters are elaborated on below.

C CONFIDENTIALITY

11 The following information in this Submission is confidential to Telstra and may only be disclosed by the Commission to persons approved of in writing by Telstra who have signed and provided to Telstra confidentiality undertakings which are acceptable to Telstra:

Section	Paragraph	Information
I - Commission's approach to uncertain estimates in assessing the Undertakings	50	"c-i-c"; "c-i-c"; "c-i-c".
I - Commission's approach to uncertain estimates in assessing the Undertakings	53	"c-i-c"

D SUMMARY OF GASNET DECISION IN RELATION TO THE RISK FREE RATE

*Final Approval - GasNet Australia access arrangement revisions dated 17 January 2003 (**"Final Approval"**)*

12 In its access arrangement, GasNet proposed to use the 10-year Government bonds to determine the risk free rate.

13 The Commission rejected GasNet's risk free rate set by reference to 10-year Government bonds and instead adopted a risk free rate based on 5-year Government bonds. The Commission claimed its decision was correct as it maintained its approach of using bond rates corresponding with the length of the regulatory period. The Commission argued that by using rates corresponding to the regulatory period (for example, 5 years rates for 5 year regulatory periods), the present value of future cash flows matched the value of the initial investment.

The GasNet Decision

14 GasNet appealed and submitted that the Commission had erred and ought to use a risk-free rate based on 10-year Government bonds.

15 The Tribunal agreed, relevantly stating that:

> "*…Whilst it is no doubt true that the CAPM permits some flexibility in the choice of inputs required by the model, it nevertheless requires that one remain true to the mathematical logic underlying the CAPM formula…*

The Commission erred in concluding that it was open to it to apply the CAPM in other than the conventional way to produce an outcome which it believed better achieved the objectives of s8.1 In truth and reality, the use of different values for a risk free rate in the working out of a Rate of Return by the CAPM formula is neither true to the formula nor a conventional use of the CAPM. It is the use of another model based on the CAPM with adjustments made on a pragmatic basis to achieve an outcome which reflects an attempt to modify the model to one which operates by reference to the regulatory period of five years. The CAPM is not a model which is intended to operate in this way. The timescales are dictated by the relevant underlying facts in each case and for present purposes those include the life of the assets and the term of the investment.

The Tribunal is satisfied that the use by the GasNet of a ten year Commonwealth bond rate to determine a Rate of Return on equity… was a correct use of the CAPM and was in accordance with the conventional use of a ten year bond rate by economists and regulators where the life of the assets and length of the investment approximated thirty years in the MRP calculation and the risk-free rate."[3]

E COMMISSION'S APPROACH TO THE RISK FREE RATE IN ASSESSING THE UNDERTAKINGS

16 In its Preliminary View, the Commission states:

"*…while the Commission finds the price terms and conditions proposed in the Undertaking reasonable, it does so for the reasons set out in its model price terms and conditions determination, and not for those outlined by Telstra in its submission supporting the Undertakings.*"[4]

17 The Commission's views as set out in the Final Determination in relation to the risk free rate are as follows:

"*With regard to the appropriate risk-free rate, the Commission is aware of the debate over the length of time the risk-free rate should refer to. The possible lengths of time range from one year (as that is the period for which the model sets a price) to 10 years (as argued by Telstra). For the purposes of calculating indicative costs using the PIE II model, the Commission will estimate a risk-free rate whose term equals the period over which the indicative prices are set, as a ten-day average leading up to the beginning of that period. This rate will be used to calculate the WACC which will be kept constant for the three years covered by the period of the PIE II model. This is consistent with the Commission's past position on these matters, which is to set the risk-free rate corresponding to the relevant regulatory period.*"[5]

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[3] GasNet Decision, paragraphs 44, 46, 47-8.
[4] Preliminary View, page 26.
[5] Final Determination, pages 39-40.

18 Telstra considers that the Commission should revise its views with respect to the appropriate risk free rate for the WACC in light of the Tribunal's position as set out in the GasNet Decision.

F SUBMISSIONS IN RELATION TO THE RISK FREE RATE

19 As referred to above, the specific issues directly considered by the Tribunal in the GasNet Decision included whether:

- the appropriate maturity of the risk free rate should be governed by the regulatory period or the life of the relevant assets;
- consistent application of the risk free rate across the CAPM is necessary.

20 In providing its views on these issues, the GasNet Decision informs two important aspects of how the risk free rate component of the WACC should be considered and calculated in the context of the Undertakings. These are discussed below.

Maturity of the Risk Free rate

21 Telstra has consistently argued that the appropriate horizon for establishing the maturity of the risk free investment is the expected life of the relevant assets. This is generally regarded as international best practice and has been a long adopted convention. The Commission, however, has taken the view that the maturity of the risk free rate should be based on the regulatory period, which applies in the relevant context.

22 The GasNet Decision clearly rejected the Commission's view and instead reinforced the long held convention that the appropriate maturity of the risk free rate should be educated by the useful life of the relevant assets. The Tribunal's view is that the adoption of any other maturity (including using the regulatory period) is not a valid and correct use of the CAPM.

23 The only constraint to directly adopting the asset life as the maturity of the risk free investment with long-life assets (sometimes beyond 30 years) is the depth of financial markets with such maturities. The longest maturity Government bond available in a well established market in Australia is generally regarded as the 10-year Government bond. Consequently, the 10-year Government bond is typically used as the risk free investment and was used by the Tribunal in the GasNet Decision.

24 In Telstra's view, the Tribunal's clear rejection of the Commission's approach to determining the maturity of the risk free rate means that the Commission should now align its views with those expressed by the Tribunal and adopt a 10-year Government bond as the risk free investment in subsequent deliberations.

Internal consistency

25 Telstra has consistently maintained the view that the risk free rate and the market risk premium (**"MRP"**) need to be interdependently determined and that the estimate of the MRP will generally vary inversely with the maturity of the risk free investment chosen, assuming a normal upward sloping yield curve. Consequently, the Commission cannot use the MRP estimate based on 10-year Government bonds in situations where it has adopted a different maturity of the risk free investment.

26 However, the Commission has taken the view that whilst internal consistency may be desirable and the adoption of approximations and estimates for many of the component parameters may result in some internal inconsistency, it does not invalidate the CAPM.

27 The Tribunal accepted as inevitable a certain degree of flexibility in determining values for many of the component parameters of the WACC. However, in the Tribunal's view, this does not extend to contravening the basic mathematical logic underlying the CAPM formula. In particular, the value ascribed to the risk free rate has to be consistently used in the CAPM in all places that it appears. If the risk free rate is not applied consistently across the CAPM formula, then not only is internal inconsistency increased but the logic underpinning the CAPM is also compromised.

28 The necessary consequence of this view is that the value chosen for the MRP must be set with direct reference to the maturity of the risk free investment.

Conclusion

29 The views expressed by the Tribunal clearly indicate that the Commission should adopt the 10-year Government bond as the most appropriate risk free investment in determining the WACC. Moreover, the estimated yield for the risk free rate must be applied consistently across the entire CAPM formula. This results in a MRP that varies inversely with the maturity of the risk free investment depending on the slope of the yield curve. Any other construct is not consistent with the mathematical logic underpinning the CAPM.

G SUMMARY OF EPIC DECISION IN RELATION TO UNCERTAIN ESTIMATES

Final Approval

30 In the Final Approval, the Commission rejected Epic's access arrangement on the basis that, amongst other things, Epic had used a line pipe cost in estimating the cost of the pipeline which was excessive. Instead, the Commission used a line pipe cost of $1,053, which was the lowest price in a range presented in a report of Microalloying International Inc (**"Microalloying"**).

31 In its report, Microalloying presented estimates of prices of line pipe sourced from six countries, as follows:

(a)	Greece	$1,053;
(b)	Korea	$1,190;
(c)	Japan	$1,235;
(d)	Australia	$1,255;
(e)	North America	$1,270;
(f)	Brazil/Argentina	$1,340.

32 Microalloying also advised the Commission that:

(a) "*pipe prices can be volatile and may change within weeks or months depending on the "go-ahead" of major projects for construction*";

(b) its report would background an understanding of the world market situation at "*this point in time*" but cautioned that it was "*not in a position to offer informed comment on market trends into the future except in a general sense*".

The Epic Decision

33 The Tribunal noted that the quoted prices from suppliers were both job and time specific. Thus indicative prices may not provide a useful and accurate guide in relation to the appropriate costs of the pipeline to be included in Epic's costs. The Tribunal concluded that the Commission had treated the Microalloying figures with a degree of specificity and certainty that was inappropriate given the qualifications Microalloying had placed upon its findings. The Tribunal stated:

> "*… For planning purposes, however, this price cannot be known with any certainty and a prudent operator would likely find it to be commercially unwise to plan a pipeline project based on the lowest line pipe cost, or even the average line pipe cost of suppliers in the lowest-cost producing country. The risk here is highly asymmetric, all on the upside. Thus a prudent operator, in the absence of perfect information, would factor into its estimates the expected value of the line pipe costs based on its estimation of the range of likely future prices and the assessed probability of occurrence of each possible price.*
>
> *In the absence of knowledge of such a probability of distribution at the planning stage, an operator might therefore obtain some indicative estimates based on less-than full information being available, compared with a specific tender to job specifications, and take either a simple arithmetic average, a modified arithmetic average, or the median of these prices as the indicative planning parameter value.*"[6]

34 The Tribunal accordingly decided that in those circumstances, taking an average of the prices recorded for each of the six countries would be what a prudent operator might reasonably be expected to do in order to determine a representative expected line pipe cost in the presence of incomplete and imperfect information.[7]

H SUMMARY OF GASNET DECISION IN RELATION TO UNCERTAIN ESTIMATES

Final Approval

35 The relevant section of the National Third Party Access Code for Natural Gas Pipeline Systems (**"the Code"**) provides that the Commission may approve an Access Arrangement only if satisfied that the proposed Access Arrangement contains the elements and satisfies the requirements set out in the Code.

36 The Commission rejected GasNet's Access Arrangement and approved its own Access Arrangement because it considered that the parameters used by GasNet to calculate the Reference Tariff were not correct. The Commission therefore adopted what it considered to be better estimates of those parameters.

GasNet Decision

37 The Tribunal considered there was no single correct figure involved in determining the values of some of the parameters to be applied in developing a Reference Tariff, as the application of the Reference Tariff principles necessarily involves issues of judgment and

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[6] Epic Decision, paragraphs 63-64.
[7] Epic Decision, paragraphs 97-99.

degree. Different minds, acting reasonably, can be expected to make different choices within a range of possible choices which nonetheless remain consistent with the Reference Tariff principles.

38 Where the Access Arrangement proposed by the service provider fell within the range of reasonably open choices which were consistent with the Reference Tariff principles, it was beyond the power of the Commission to reject the proposed Access Arrangement simply because it preferred a different Access Arrangement which it believed would better achieve its understanding of the statutory objectives.

I COMMISSION'S APPROACH TO UNCERTAIN ESTIMATES IN ASSESSING THE UNDERTAKINGS

39 In assessing Telstra's undertakings dated 9 January 2003 (**"January Undertakings"**), and also in forming its views on the model price terms and conditions for the UT Services as set out in the Final Determination, the Commission has, in the absence of perfect and complete information, estimated a number of parameters used in calculating the efficient costs of the PSTN. Examples of the Commission's approach in this regard are set out below.

Inputs for the PIE II model

40 In the Preliminary View, the Commission disagrees with Telstra in relation to a number of aspects of the Further Submission, and particularly with regard to the quantification of efficient costs. The Commission expresses concerns over the appropriateness of the PIE II model in calculating the efficient costs of the UT Services. Therefore, the Commission states that while it considers the price terms and conditions proposed in the Undertakings to be reasonable, it does so for the reasons set out in the Final Determination, not Telstra's Further Submission, having specifically "*considered and dismissed most of Telstra's contentions regarding the efficient costs of the services…*".[8]

41 In this regard, in the Final Determination the Commission states that it has used the PIE II model to inform itself of the broad quantum of network costs associated with PSTN OTA and ULLS.[9] However, the Commission notes its disagreement with Telstra in relation to a

[8] Preliminary View, section 8,1, page 26.
[9] Final Determination, page 32.

number of inputs for the PIE II model, in particular with respect to certain WACC parameters canvassed below.[10]

WACC parameters

42 The Commission has used WACC parameters taken from its assessment of Telstra's undertakings dated 1999 which differ from those Telstra has proposed as appropriate in relation to the Undertakings, with the exception of the risk free rate (discussed in section F of this Submission), and debt-issuance costs.

43 The GasNet Decision dictates that the Commission should not consistently adopt the low-point of a valid range for the WACC parameters by valuing the WACC components at or near their minimum value. Moreover, given the inherent subjectivity and uncertainty in determining values for the WACC parameters, the Epic Decision is relevant to all the component parameters, and dictates that the Commission should not reject the WACC parameters Telstra has submitted as appropriate in the context of the Undertakings.

44 In this regard, it is clear that a prudent service operator would not use a low-point WACC estimate in the *ex ante* evaluation of a particular project. The prudent operator would instead factor in different levels of WACC based on potential values for the component parameters. Unless a sensitivity analysis such as this were undertaken, the prudent service operator could not be certain that the project would enhance shareholder value.

45 In the Epic Decision, the Tribunal outlines the relevance of replicating the outcomes of efficient competitive markets and notes that replicating efficient markets does not require use of the lowest indicative prices.[11] Telstra considers that this statement of principle also applies to replicating the operation of efficient capital markets in calculating the various market determined parameters of the WACC.

46 The Tribunal additionally notes in the Epic Decision that adopting the minimum line pipe cost exposes the pipeline owner to an asymmetric risk that the likelihood of underestimating the true cost of the pipeline was greater than overestimating the true cost.[12] This would ultimately result in the pipeline owner not recovering sufficient funds to allow ready replacement at an appropriate time.

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[10] Final Determination, pages 35-41.
[11] Epic Decision, paragraph 92.
[12] Epic Decision, paragraph 94.

47 Telstra considers that this applies equally to the WACC (and its components). If the Commission consistently adopts the lowest values for the WACC components, this will result in the asymmetric risk that the estimated WACC is more likely to be lower than the "true" WACC and therefore the asset owner (in this context, the PSTN access provider) will not earn a sufficient return to compensate for the likely risks involved.

48 The Tribunal's views in the Epic Decision on not adopting minimum values are more critical when compounded with the implications of understating WACC vis-à-vis overstating. If the overall return on capital (WACC) is too low, the PSTN provider will be unable to recover the efficient and prudently incurred costs of PSTN construction. Whilst this may provide short term benefits to access seekers and end users in the form of lower current prices, it would be detrimental in the medium to long term as it would reduce the incentive for the PSTN provider to re-invest in the PSTN and discourage access seekers from building an alternate PSTN, even if they were more efficient than the access provider. Conversely, if the overall return on capital were too high, the main effect would simply be to increase the prices paid by access seekers and ultimately end users. Therefore, there is an asymmetry in the ultimate effects of a misapplication of the WACC. If the WACC is too low, future investment and/or modernisation of the PSTN is compromised. This implies that some end users will not obtain services which they value at more than the cost society incurs from their provision with significant consequences for the extent of innovation and quality of service. Conversely, if the WACC is too high, the effect would be to cause an allocative inefficiency, which does not have the same negative implications for service availability, innovation and quality of service.

49 Accordingly, Telstra submits that the Commission should adopt Telstra's estimates of the WACC parameters for the reasons set out in the Bowman Report, and Annexure K of the Detailed Submission..

Estimates of ULLS demand

50 For the purposes of calculating ULLS-specific costs in order to determine the indicative prices for ULLS, it is necessary to use demand estimates for ULLS take-up. Telstra's demand estimates for ULLS for each year of the January Undertakings, based on actual demand trends following the launch of ULLS (as set out in Annexure N of Telstra's Methodology Submission), and revised in relation to the Undertakings (as set out in the Further Submission) are shown in the table below. The Commission did not accept Telstra's estimates. As set out in the Final Determination and shown in the table below,

the Commission's estimated cumulative ULLS demand is significantly higher than Telstra's estimates.

Year	Telstra's estimates of services in operation ("SIOs")	Commission's estimates of SIO
2003-04	c-i-c	c-i-c
2004-05	c-i-c	c-i-c
2005-06	c-i-c	

51 The Commission's adoption of ULLS demand estimates significantly in excess of actual demand and of Telstra's own estimates will result in Telstra failing to recover ULLS specific costs. Moreover, the Commission's adjustment mechanism which seeks to redress the differences between estimated and realised demand in each year is still based upon the flawed ULLS demand estimates adopted by the Commission, and is therefore of limited utility.

52 In this regard, Telstra refers to paragraphs 144 and 145 of the Detailed Submission which set out the reasons why the Commission's previous estimates of ULLS demand, as stated in its "*Prices of Unconditioned Local Loop Services - Final Report*" dated March 2002, have proven so unrealistic. Although forecast estimates are inherently uncertain, the slow take-up of ULLS in the past and Telstra's historical experience (which shows that Telstra's own forecasts have also consistently overstated the level of actual ULLS demand achieved, indicating that an additional level of conservatism is warranted) place Telstra in the best position to estimate the future take-up of ULLS. Therefore, the Commission has no reason to doubt that Telstra's estimates are accurate or assert that its (higher) estimates are more accurate.

53 While Telstra appreciates that the Commission has accepted an adjustment mechanism as appropriate to mitigate the effects of the inherent uncertainty of ULLS demand forecasts, the adjustment mechanism adopted by the Commission only allows the recovery of costs in 2004/05 equivalent to a minimum of 56,000 SIOs. Thus, if Telstra's estimates for 2004/05 are accurate (c-i-c), Telstra will not recover its costs. On this basis and given that Telstra's estimates certainly fall within the range of reasonable estimates (as contemplated by the Epic Decision), Telstra submits that the Commission should revise its approach to estimating ULLS demand.

Estimate of ULLS specific WACC

54 Telstra sets out its approach in relation to calculating and applying the WACC in the ULLS context in paragraphs 91 to 105 of the Model Price Submission.

55 Telstra refers to its position in relation to the Commission's choice of the component WACC parameters as set out in paragraphs 42 to 49 above with respect to the Commission's adoption of a ULLS specific cost pre-tax nominal WACC of 9.59% for the purpose of calculating ULLS specific costs.

J SUMMARY OF SUBMISSIONS ON COMMISSION'S APPROACH TO UNCERTAIN ESTIMATES

56 After considering the Undertakings, the Commission must either accept or reject the Undertakings.[13] However, the Commission must not accept the Undertakings unless satisfied that the terms and conditions specified in the Undertakings are reasonable.[14] In assessing the "reasonableness" of the terms and conditions contained in the Undertakings, the Commission is required to have regard to the following matters:

(a) whether the terms and conditions promote the long-term interests of end-users of carriage services or of services supplied by means of carriage services;

(b) the legitimate business interests of the carrier or carriage service provider concerned, and the carrier's or provider's investment in facilities used to supply the declared service concerned;

(c) the interests of persons who have rights to use the declared service concerned;

(d) the direct costs of providing access to the declared service concerned;

(e) the operational and technical requirements necessary for the safe and reliable operation of a carriage service, a telecommunications network or a facility; and

(f) the economically efficient operation of a carriage service, a telecommunications network or facility.[15]

57 In assessing the quantum of Telstra's efficient network costs, and estimates of the various inputs used by the PIE II model in calculating these costs, it is not open to the

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[13] Section 152BU(2) of the Act.
[14] Section 152BV(2)(d) of the Act.

Commission to reject an estimate provided by Telstra where it falls within a range of possible choices which are reasonable, taking into account the factors set out above.

58 In particular, the GasNet and Epic Decisions dictate that it is not open to the Commission, in the absence of perfect information, to select the lowest estimate within a possible range of reasonable options. The Commission should therefore revise its assessment with respect to estimates of the WACC parameter inputs for the PIE II model, the ULLS specific WACC, and ULLS demand.

K COMMISSION'S APPROACH TO EQUITY ISSUANCE COSTS

59 In the Final Determination, the Commission states that it does not accept the inclusion of equity issuance costs in the WACC.

60 For the reasons set out in the Detailed Submission (at paragraphs 109 to 120 of Annexure K, and also section 9.3 of the Bowman Report), Telstra does not agree with the Commission's position. Equity issuance costs are costs legitimately incurred by the stand-alone PSTN-provider and must become part of the recognised cost base to avoid under-compensation.

61 The Commission also states that it is not aware of any precedent for the addition of equity issuance costs in WACC calculations.[16] However, in paragraph 112 of Annexure K of the Detailed Submission, Telstra cites the Commission's Final Decision on GasNet wherein the Commission decided to "*include an allowance for equity raising costs of 0.224 per cent of regulated equity, to be recovered as an annual non-capital cost cash flow*."[17]

Dated: 15 March 2004

[15] Section 152AH(1) of the Act.
[16] Final Determination, page 39.
[17] *Final Decision, GasNet Australia Access Arrangement Revisions for the Principal Transmission System*, dated 13 November 2002, pp 143-151.