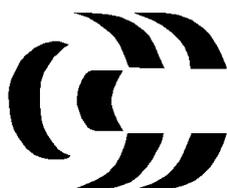


**TELECOMMUNICATIONS ACT 2001:
SCHEDULE 3 INVESTIGATIONS INTO
AMENDMENTS TO THE ROAMING & CO-
LOCATION SERVICES**

Issues Paper

15 December 2006



COMMERCE COMMISSION

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1. Introduction and process

Background

1. On 10 May 2006, the Commission announced that it would examine the reasons for lack of new entry into the cellular mobile services market as a prelude to deciding whether or not to commence an investigation into possible changes to the regulatory framework
2. The Commission held a series of meetings with parties who have a material interest in the mobile market and reviewed the state of competition in the market for mobile services.
3. On 10 October 2006, the Commission announced that there are reasonable grounds to investigate:
 - amending the terms of the national roaming service;
 - moving the national roaming service from a specified to a designated service; and
 - moving the co-location service from a specified to a designated service.
4. The publication of this Issues Paper is the first stage of the investigations into whether or not the specified national roaming and co-location services in the Telecommunications Act 2001 (“the Act”) should be amended. The publication of an Issues Paper is not a statutory requirement, rather it is a convenient and effective means by which the Commission can gather preliminary information needed to inform the Commission’s analysis prior to the Commission releasing its draft report. The Issues Paper identifies and discusses issues that are specific to the Schedule 3 investigations into roaming and co-location. The Commission acknowledges that parties have previously made submissions on a number of issues around the roaming and co-location services during the review of regulated services and the review of entry issues in the mobile market. Parties should therefore confine their responses to the specific issues raised in this paper.

Commission process and timetable

5. The Issues Paper begins the process of consultation with interested parties as part of the Schedule 3 investigations. The Commission is seeking responses on the questions in this paper. The consultation questions are summarised at the end of the Paper. The closing date for written submissions is 9 February 2007.
6. Table 1 sets out the Commission’s proposed timetable for the investigation.

Table 1 Proposed timetable for Schedule 3 investigations

Steps and procedures	Deadline
Publication of the Issues Paper	15 December 2006
Closing date for written submissions	9 February 2007
Publication of Draft Report(s)	Mid May 2007
Closing date for written submissions on Draft Report(s)	End June 2007
Closing date for cross submissions	Mid July 2007
Public conference on Draft Report(s) and written submissions	End July 2007

Public availability of submissions

7. To promote an open and transparent process, the Commission intends to publish as many submissions as possible on its website. Accordingly, the Commission requests that all submissions are provided in electronic form.

Status of information supplied to the Commission

8. The Commission has issued a confidentiality order under section 100 of the Commerce Act and section 15(i) of the Act, to apply to information provided by interested parties making submissions in these proceedings. The Order will allow interested parties making submissions to designate information as Restricted Information. Any persons who wish to receive or provide Restricted Information must sign a deed of undertaking in an appropriate form and in accordance with the Order. The details of the confidentiality order is on the Commission's website at www.comcom.govt.nz.
9. After the expiry of the Commission's confidentiality order, the Commission will follow its usual practices in response to any request for information under the Official Information Act 1982.

Contact details

10. Please contact Tom Forster at thomas.forster@comcom.govt.nz or (04) 924 3742 should you have any questions regarding the process. Please forward all electronic versions of submissions to thomas.forster@comcom.govt.nz.

2. Investigation Framework

11. The Telecommunications Amendment Act has been passed. The Act sets up a transitional mechanism for Schedule 3 investigations already commenced but not completed. The Commission has an option either to complete the investigation under the old process or under the amended Schedule 3 process. The Commission will shortly decide what process to use .
12. The assessment of whether or not amending the regulations best gives effect to the promotion of competition for the long-term benefit of end-users can be broken down into a number of stages. In coming to a recommendation, the Commission considers it will need to:
 1. Identify the relevant telecommunications markets;
 2. Assess whether there is limited competition in the relevant market or markets; and
 3. Undertake a cost benefit analysis to assist the Commission in reaching a decision on the competition impacts of regulatory change.
13. In August 2006, the Commission defined and assessed competition in the markets for roaming and co-location during its investigation into the extension of ten of the thirteen regulated services in the Act.¹
14. The Commission concluded in that review that the relevant markets for the national roaming and co-location services were:
 - the national wholesale markets for national roaming on GSM and CDMA mobile networks; and
 - the national wholesale market for co-location on cellular transmission sites;
15. The Commission concluded in the report that neither Vodafone nor Telecom face competition for the provision of roaming services on their respective networks. The Commission also concluded that there is limited competition in the market for co-location on cellular mobile transmission sites.
16. It is the Commission's preliminary view that these market definitions and competition assessments should be retained for the purposes of this investigation.

¹ Commerce Commission, *Schedule 3 Investigation into the Extension of Regulation of Designated and Specified Services, Final Report*, August 2006.

3. Costs and Benefits of Amending the Services

17. In considering whether to recommend amendments to the regulated roaming and/or co-location service, the Commission will make the recommendations that best give, or are likely to best give, effect to the promotion of competition for the long-term benefit of end-users. In considering this, the Commission will also need to consider any efficiencies that would be likely to result from any recommended act or omission.
18. An important part of this consideration is an assessment of the benefits and costs that result from the proposed regulation. In order to assess those benefits and costs, the Commission makes a comparison between two scenarios: a counterfactual scenario, which represents the Commission's view on what is likely to happen in the absence of the proposed new regulation or amendment of current regulation, and a factual scenario, in which the proposed regulation or amendment is introduced.
19. This may involve a qualitative and/or a quantitative assessment of whether the proposed regulation will promote competition for the long-term benefit of end-users.

Definition of the counterfactual

20. Establishing an appropriate counterfactual scenario is a key step in the subsequent analysis of the benefits and costs of regulation. It forms a benchmark against which changes arising from the proposed regulation can be measured.

Question 3.1

- (a) **To what extent are commercial negotiations being undertaken for the services?**
- (b) **What is the likelihood of commercial agreements being reached for the services?**
- (c) **What is the likely counterfactual for the services?**

Definition of the factual

21. The Commission will base its view of a suitable factual on an assessment of what is likely to occur as a result of any amendments made as a result of the Schedule 3 investigations, the effects of which are to be assessed in terms of section 18 of the Act. For example, in considering whether to designate the roaming and co-location services, it will be necessary to consider the form of regulation, and in particular the way in which the regulated prices of those services would be set.²

² The nature of the proposed regulation, including the pricing principles that would apply, are discussed in chapter 4.

22. In addition, it will be necessary to consider what impact the amended regulation would have, in terms of promoting new entry, and the effect of any such new entry on *inter alia* the level of prices, service quality and variety, and innovation in the market in which retail mobile services are supplied to end-users.

Question 3.2

- (a) **What is the likely factual? What would be an appropriate designated roaming service and co-location service? How would the service compare to the services available under the counterfactual (in particular, in terms of pricing)?**
- (b) **How would such changes to the current specified services lead to long term benefits for end-users, which would not otherwise have been forthcoming? What empirical evidence is available to support such scenarios?**
- (c) **What is the interrelationship between the roaming and co-location services? How does the price of one service affect the other?**
- (d) **To what extent would amendments to the regulated service reduce barriers to entry?**

Assessing the costs and benefits

23. In considering the possible benefits that would accrue to end-users under regulation, it will be necessary to consider how improvements to the roaming and/or co-location service would flow through into the relevant downstream retail markets in which end-users purchase services.
24. If competition is already workable or effective in the relevant markets, then amending the regulations is unlikely to promote competition further as further regulation may create inefficiencies in the market.
25. The impact of such entry at the network level would then need to be evaluated at the downstream retail level, for example, in terms of the level of retail prices and the range and quality of retail services. While it may be difficult to speculate on the precise impact of new entry, the Commission does note that new entrants on a sufficient scale can have a disproportionate impact in the retail market, both in terms of the entrant attempting to attract subscribers and build up scale, and the incumbents responding. Evidence of the impact of new entrants in other markets or jurisdictions may be useful in this regard.
26. When considering the possible benefits from amending the regulated services, it may be necessary to take into account any likely interplay between the terms on which co-location and roaming are available. For example, the demand for roaming services may be influenced by access to co-location, and vice versa, as these services both relate to the "build or buy" decision of an entrant. Therefore, the benefits from a designated roaming

service may change, depending on what alternatives are available to the entrant to extend its coverage, including the availability of a designated co-location service.

Analysis

27. In undertaking a Schedule 3 investigation, the Commission will consider a number of factors including the promotion of competition, the long-term benefit of end-users and efficiency. This will often involve both qualitative and/or quantitative considerations of these factors.
28. For example, in a qualitative sense, competition in wholesale and downstream markets is likely to be promoted where:
 - The service is, or could be, used as an input in the supply of downstream services, particularly where it is a material component of a downstream service;
 - There is market demand for the service, and in the absence of regulation the service would not be supplied or would only be supplied at a price well in excess of the cost of supply;
 - Regulation is expected to lead to improved access and supply at a price closer to cost;
 - Regulation alters market structures such that the exercise of market power becomes more difficult. This could be through:
 - Lowering barriers to entry, permitting more efficient firms to enter and thereby constraining the pricing behaviour of the access provider; and
 - Restricting the ability of the access provider to raise rivals' costs.
29. Qualitative analysis of this kind may show that designation of roaming may be found to promote competition in the provision of retail mobile services, by reducing the barrier to entry represented by national coverage,.
30. The Commission will also be interested in the experience of other jurisdictions where roaming and/or co-location services have been subject to regulation (or the threat of regulation). This includes any evidence that regulation of these services has facilitated the entry of new mobile network operators, as well as evidence of the impact of such new entry in retail mobile services markets.
31. A quantitative analysis may measure the impact of designation, for example by modelling the sensitivity of the business case of a potential entrant who is considering the deployment of a mobile network, to the price at which roaming is available. If it can be demonstrated that a designated roaming service would facilitate new entry (i.e. by addressing the difficulty for the entrant of providing national coverage), then designation could be considered to promote competition. Such a quantitative approach may provide some guidance as to the extent to which the proposed amendment would satisfy the purpose set out in section 18 of the Act.
32. The Commission generally considers that a quantitative assessment of the benefits and costs of regulation can be a useful input into its decision-making process, particularly to

the extent that it focuses on key assumptions regarding characteristics of the market and the way in which market participants are likely to act with and without regulation. However, the Commission also recognises the limitations of a quantitative approach, in particular the sensitivity of the results to the underlying assumptions and other data inputs, and the often inherently uncertain nature of what is being modelled. In considering any quantitative economic modelling, the Commission will also be conscious of the need to expose any modelling including the underlying data to as much scrutiny as possible.

33. In any quantitative assessment of the benefits and costs of regulation in the context of a Schedule 3 investigation, the Commission's primary focus is on the impact of regulation under a consumer welfare approach, where only changes in consumer surplus are measured.
34. In considering the impact of regulation on the level of consumer surplus, it will be necessary to consider how regulation which is focused on one functional level (i.e. the wholesale level) would be likely to flow through into a downstream (retail) functional level. This has been an important consideration in previous Schedule 3 investigations. For example, in assessing the benefits of regulating mobile termination rates, the Commission considered the extent to which regulated reductions in mobile termination rates would be passed through into lower retail fixed-to-mobile prices. The resulting reduction in retail calling prices was used to determine the increase in consumer surplus arising from regulation.³
35. In the mobile termination investigation, the Commission's cost-benefit analysis focused on the extent to which regulation would promote competition in the downstream retail calling market.⁴ This was largely on the basis of existing retail competitors being able to compete more vigorously, which would provide greater benefits to end-users than would be available under the counterfactual. Although the mobile termination service was already available, it was priced at a level that was considerably above the estimated cost of terminating calls on a mobile network.
36. While the Commission's primary focus on assessing benefits is on changes in consumer surplus, the Commission also considers the implications for efficiency, as required under section 18 of the Telecommunications Act. The three forms of efficiency are allocative efficiency, productive efficiency and dynamic efficiency.⁵
37. The Commission is interested in identifying the likely costs and benefits that would result from amending the regulation of roaming and co-location services in New Zealand. The Commission is also interested in the views of parties on the way in which the assessment of the costs and benefits of amending the regulation of roaming and co-location services in New Zealand should be undertaken. This includes views on whether the Commission

³ Commerce Commission, *Schedule 3 Investigation into Regulation of Mobile Termination, Final Report*, June 2005

⁴ Ibid

⁵ See Commerce Commission, *A guide to the role of the Commerce Commission in making access determinations under the Telecommunications Act*, 28 May 2002, p16 for a discussion of these types of efficiencies.

should undertake a quantitative assessment of the costs and benefits of amending the regulation of roaming and co-location service.

Question 3.3

- (a) **In principle, what benefits and costs do respondents consider would result from designating the services (that would not eventuate in the absence of such designation)?**
- (b) **Should these benefits and costs be evaluated in qualitative or quantitative terms (or a combination)? Is there any particular modelling approach that should be adopted to best evaluate the benefits and costs?**
- (c) **To what extent have parties themselves conducted or intend to conduct a quantitative assessment of the impact of designating roaming and co-location services in New Zealand (for example, by modelling the impact of designation on the business case of a new entrant)?**
- (d) **What empirical evidence is available from overseas jurisdictions on the impact regulating roaming and/or co-location services (or the threat of regulation) has made on new entry?**
- (e) **Do respondents have a view on how any interplay between roaming and co-location should be accounted for in the Commission's assessment of the benefits of any amendments?**
- (f) **Could one service act as a substitute for the other? If so under what conditions?**

Regulatory cost and scope for regulatory error

38. The Commission's guide to access determinations⁶ sets out a number of regulatory costs and risks that will need to be factored into an overall assessment. Considerations in the Schedule 3 investigation include:
- Whether there is demand for the service for which regulation is being considered;
 - The likelihood of the service being provided at a reasonable cost without regulation;
 - Whether regulation will lead to a distortion of investment decisions and stranded assets; and
 - Consideration of the most efficient pricing principles.
39. The Commission considers that if roaming and co-location are designated, development of appropriate pricing principles would be required to limit any distortions to the efficient level of investment in infrastructure used to provide the services associated with either roaming or co-location.

⁶ Commerce Commission, *A guide to the role of the Commerce Commission in making access determinations under the Telecommunications Act*, 28 May 2002.

4. Service Specification

40. The Commission's Draft Report must include the detail of the proposed alteration to the Act if amendments are recommended. Designated and specified access services are listed in Schedule 1 of the Act. For each service, Schedule 1 gives: a description of the service; specifies the access provider and access seeker; sets out the access principles and any limits on them; and, for designated services, the initial and final pricing principles.

Roaming service

41. National roaming is currently a specified service, that is restricted to second generation (2G) cellular mobile services. During the Commission's review into entry issues⁷, some parties said that it was inappropriate to distinguish between second generation and third generation (3G) because regulation should be technology neutral.
42. The current roaming regulation can only be accessed if an access seeker commits to rolling out a national network, and only after having rolled out 10% of the area in which the New Zealand population normally lives or works.⁸
43. The requirement that the access seeker commit to a full national network roll-out appears to be designed to prevent the access seeker from selectively targeting low-cost, high profitability areas, while leaving more remote and higher cost areas to be served by the existing network operators. While such 'cherry-picking' behaviour may be a legitimate concern, it could be mitigated depending on the way in which the roaming rate is determined, for example, if the roaming rate was allowed to increase over time to reflect any higher cost structure associated with the roaming service. To the extent that such a pricing structure could encourage efficient investment by both the access seeker and the access provider, it might be appropriate to consider whether the national roll-out requirement could be relaxed, in particular if a third national mobile network is unlikely to be sustainable. There may otherwise be a risk that viable entry on a sub-national scale would be jeopardised.⁹
44. The Commission noted that the requirement for a time-bound, national roll-out plan as a condition of access to the regulated roaming service may be unnecessarily stringent, and may preclude regional entry on a more limited scale.¹⁰
45. The Commission was informed that the global convergence of technologies and the ubiquitous presence of mobile devices has made the development of new mobile applications and services possible for a wide variety of different users in different situations. A number of parties noted that mobile applications with greater data rates are

⁷ Commerce Commission, *A Review of Cellular Mobile Market Entry Issues*, 10 October 2006

⁸ The percentage roll out requirement may be waived as long as all other conditions as described in the Act are met.

⁹ In its review of entry conditions, the Commission noted several instances in overseas jurisdictions where coverage requirements attached to regulated roaming services are sub-national. See Commerce Commission, *A Review of Cellular Mobile Market Entry Issues*, 10 October 2006, paragraphs 151-153.

¹⁰ Commerce Commission, *A Review of Cellular Mobile Market Entry Issues*, 10 October 2006

beginning to emerge, and the distinctions between the different types of mobile devices are fading with increasing convergence between fixed and mobile services. Hybrid devices are also developing that enable devices to access more than one type of network. They further argued that consumers are becoming more sophisticated and in the near future would want to access consistent services easily regardless of the device they are using (e.g. phone, PDA, laptop) or the type of network that is being accessed (e.g. HSPDA, 3G, WiMax and Wi-Fi).¹¹

46. A number of parties suggested that the Commission should consider facilitating an environment where inter-network roaming (i.e. between different network technology types e.g. between WiMax and HSPDA technologies) may be able to occur. They pointed out that mobility across multiple networks will be a mainstream reality in the very near future.¹²
47. The Commission seeks views and comments from interested persons on how roaming should be defined, and what restrictions, if any, should be put on a description of roaming for the purposes of amending the currently specified service. Further, if amendments were made, should the service description be broad such that it can apply across a range of network types?

Question 4.1

- (a) **Should the requirement to cover 10% of the area in which the New Zealand population normally lives or works before accessing the roaming regulation still be in place?**
- (b) **If so, what should the 10% cover – population or area?**
- (c) **Should an access seeker still be obliged to commit to rolling out a national network?**
- (d) **If national roll-out is unnecessary, should there be a minimum roll-out (% of population) necessary?**
- (e) **Should roaming cease to be available in particular areas as a new entrant builds out its network?**
- (f) **Should there be a sunset clause for the provision of roaming?**
- (g) **Should the amended roaming regulation include 3G-3G roaming?**
- (h) **Do value-added services, as set out in the current roaming service description, include data services? Should data services be specifically included in the roaming service description?**
- (i) **What provisions need to be made to facilitate data roaming?**
- (j) **Are there any technical issues associated with voice roaming which the Commission should be aware of?**
- (k) **Are there any technical issues associated with data roaming which the Commission**

¹¹ Ibid

¹² Ibid

should be aware of?

- (l) Should inter-network roaming (roaming between different technology types) be considered?**
- (m) Is inter-network roaming feasible within the time period usually used to assess new entry (2-3 years)? If so on what types of networks should the service cover?**
- (n) If inter-network roaming is considered, does this affect the markets already defined? If so how?**
- (o) What are the technical issues that need to be considered for inter-network roaming?**

Pricing principles

- 48. Regulated prices can be set by either a retail-minus pricing principle, or a cost-based pricing principle. In determining a wholesale price under a retail-minus pricing principle, a retail price is used from which is deducted a measure of the costs able to be saved by the access provider when only the wholesale service is provided. Under a cost-based principle, the wholesale price reflects the efficiently-incurred costs of providing the wholesale service.
- 49. Retail-minus access prices can protect a particular structure of retail prices, which might be jeopardised if access were available to a competitor on the basis of cost-oriented prices. A retail-minus pricing structure allows the access provider to continue making its current return for wholesale access.
- 50. The use of a retail-minus pricing methodology may not necessarily be an appropriate competition remedy in all circumstances. To the extent that retail prices are inflated, the corresponding wholesale price for the access service will also embody excessive returns.
- 51. Access to a number of Telecom's fixed-line services are currently designated under the Act. The current retail-minus pricing principles use two different measures of costs to be deducted from retail prices in order to establish the wholesale price. These measures are actual costs saved in markets where Telecom does not face limited competition and avoided costs saved in markets where Telecom faces limited competition.
- 52. The retail-minus approach could present difficulties in determining and calculating the necessary average retail base prices. If the roaming service is available only for 2G services, the relevant retail services may be voice calling and SMS. However, if the service is changed to support 3G services, data services may also be relevant. It is not clear how a single roaming price could be derived using a retail-minus methodology, given the diversity of 3G voice and data services.
- 53. A cost-based approach will seek to estimate the underlying cost of providing the roaming service. A number of different measures could be used to establish the cost of delivering

the service. Internationally, total service long-run incremental cost (TSLRIC) is often considered to be an appropriate method for the calculation of cost-based network interconnection rates.

54. One possibility for setting a regulated cost-based price for the roaming service might be to have regard to cost-based mobile termination rates. Mobile termination refers to the costs of terminating calls on a mobile network, and this may form the basis of an appropriate proxy for the costs of providing a roaming service, which also relates to the carriage of traffic on a mobile network.
55. A possible disadvantage of cost-oriented pricing is that it might provide less incentive for access seekers to build their own networks, and further investments in extending their networks may not be made, as the access seeker can achieve national coverage by effectively purchasing capacity from one of the existing national mobile networks. Such concerns could be addressed at least partially through the level at which a cost-based roaming rate is set, or through non-price requirements that might be attached to the roaming service, such as roll-out requirements.
56. An alternative to a roll-out requirement could be to have a roaming price that rises over time to incentivise an access seeker to build their own network in areas where the cost of this is not excessive. However, it could be difficult to determine the appropriate bounds for such a rising price path.

Question 4.2

- (a) What is the most appropriate pricing methodology for access to roaming services – retail-minus or cost-based?**
- (b) If retail-minus, what would the various components of such a price look like (for example, what would be the appropriate retail price(s), would it be necessary to impute a retail price; what would be the avoided costs?**
- (c) Should a single retail-minus price cover both voice and data? How should the retail-minus price be constructed to cover both voice and data?**
- (d) If cost oriented pricing is the preferred pricing principle, is TSLRIC pricing the only viable option?**
- (e) Would cost-based mobile termination rates be an appropriate benchmark for a cost-based roaming service?**
- (f) What are the implications of each pricing principle (retail-minus and cost-based) in terms of promoting new entry?**
- (g) In what ways could access seekers and access providers be encouraged to continue to invest, if a cost-based pricing principle was used? For example, would it be appropriate to have a roaming price that rises over time? If so, what are the appropriate bounds?**
- (h) Should the pricing of voice roaming differ from that of data roaming? If so how?**

Initial pricing principle

57. The initial pricing principle is the principle used to set an interim price. It has to be able to be applied relatively quickly by the Commission, but should be an estimate of the likely final price.
58. Current designated access services take a benchmarking approach for the initial pricing principle, apart from residential local access which has a specified discount. However, given that roaming has been commercially negotiated in many countries and the regulator has not been asked to resolve a dispute, using the benchmarking approach as the initial pricing principle may be difficult due to the lack of appropriate benchmarks. On the other hand, it could be argued that since the initial pricing principle is a price that can be revised later, it is not as important that the process used to set it be particularly rigorous.
59. As noted above, benchmarking against a range of cost proxies overseas such as the mobile termination rate could increase the number of appropriate benchmarks used to set the initial price, if the final pricing principle were cost-oriented. This is likely to make the initial price more accurate.
60. If retail-minus is the preferred final pricing principle then the lack of appropriate benchmarks may mean that it is more practical to require the initial price to be estimated from whatever studies and/or commercial agreements that are available and considered relevant.

Question 4.3

- (a) **For each likely final pricing principle, what is the appropriate interim pricing principle that would provide an appropriate estimate?**
- (b) **Is benchmarking appropriate and practical?**
- (c) **Could cost proxies be used, and if so, which ones?**
- (d) **Is there a close relationship between roaming rates and mobile termination rates?**
- (e) **Would an estimation process be more appropriate to use in the situation where there are very few relevant benchmarks?**

Final pricing principle

61. The initial pricing principle has implications for the final pricing principle, which should be broadly consistent with the approach taken for the initial pricing principle.

Question 4.4

- (a) **What is an appropriate final pricing principle?**

Other Parts of Service Specification

62. Other parts of a service specification include descriptions of access seeker, access provider, access principles, limits on access principles and additional matters that must be considered regarding the application of section 18.
63. The access seeker for the roaming service is “an existing or potential cellular mobile telephone network operator (except Telecom or Vodafone or their successors or subsidiaries) that holds sufficient radio spectrum rights to enable that operator to roll out a nationwide cellular mobile telephone network in New Zealand”.¹³
64. It may be the case that in the future various telecommunication network operators, other than cellular network operators, develop technologies enabling them to enter the mobile services market. These operators might, at some stage, be willing to enter into a roaming agreement for the provision of cellular mobile services. However, without the radio spectrum rights acquired specifically to operate a cellular mobile telephone network they would not be considered as access seekers. Furthermore, cellular mobile network operators that do not have sufficient radio spectrum rights to enable them to roll out a nationwide cellular mobile telephone network will not be considered as access seekers.
65. This restriction lacks flexibility in an environment where there is a scarcity of spectrum. Any such operator that does not have sufficient spectrum to roll out the nationwide cellular mobile telephone network will not be considered as an access seeker.
66. There may also be some benefits from adopting a forward-looking solution suited for convergence of fixed and mobile networks, wire-line or wireless, by formulating the access seeker description in a way that provides scope for a broader inter-network national roaming service.

Question 4.5

- (a) **Do respondents have any views on the wording of the other parts of a service specification for roaming and whether any new parts are needed?**
- (b) **What is the most appropriate description of an access seeker?**
- (c) **Should there be alignment between the access seeker and access provider definitions?**
- (d) **Should the definitions be more forward-looking to cater for fixed-mobile convergence?**

¹³ Refer to the description in the Act.

Co-location service

67. Co-location is a specified service. Co-location on reasonable terms can facilitate network roll out by lowering construction costs faced by new entrants. The Commission concluded in the review of entry issues that the inability to obtain a regulated co-location price may limit the effectiveness of the current regulated co-location service.¹⁴

Pricing principles

68. Should the Commission's investigation conclude that there are benefits from the designation of co-location, the Commission is of the preliminary view that the pricing principle for co-location should be cost based.
69. The potential variables in calculating the costs that is efficient for co-location access seekers to pay include the appropriate share of the cost of the different components of the cell site, and the share of the extra costs imposed by co-location. Other important variables include the method of updating historic costs to take account of increased replacement costs and, where relevant, the method of scaling them back to take account of depreciation or depletion. It may be appropriate to have these and other variables specified in a cost allocation formula.
70. Co-location could entail different configurations. For ease of application, a generic solution utilising a cost allocation formula may be appropriate to cater for the different configurations.

Question 4.6

- (a) **Should co-location pricing be based on a specified formula?**
- (b) **Could co-location be classified into a number of generic site types/forms?**
- (c) **Could a cost allocation formula be used to determine the price depending on the type/form? If so how?**

Initial and Final pricing principle

71. The usual scheme used in the Act for initial and final pricing for a service is for the final pricing principle to be cost-based and the initial pricing principle to use benchmarking to estimate that cost. However, this scheme may not be appropriate for co-location since there appears to be little to benchmark against, and co-location costs are likely to vary greatly according to local conditions.

¹⁴ Commerce Commission, *A Review of Cellular Mobile Market Entry Issues*, 10 October 2006

72. For co-location it may be appropriate for the difference between the interim and final pricing principle to be based on how detailed or site specific the cost allocation formula is, or how much discretion the Commission can exercise in making the determination. The initial pricing principle should be able to be applied relatively quickly by the Commission.

Question 4.7

- (a) How should the initial pricing principle be distinguished from the final pricing principle?**
- (b) What is an appropriate interim pricing principle?**
- (c) What is an appropriate final pricing principle?**

5. Consolidated list of questions for consultation

73. The questions contained in chapters 3 and 4 are listed below. Submitters should not feel constrained from raising additional matters not covered by the questions or by previous reviews that included the roaming and co-location services. The Commission wishes to consider all issues relevant to the investigation. When answering questions, the Commission requests that parties explain the rationale for why a particular view is taken and, if possible, give supporting evidence for the view.

Chapter 3

Question 3.1

- (a) To what extent are commercial negotiations being undertaken for the services?
- (b) What is the likelihood of commercial agreements being reached for the services?
- (c) What is the likely counterfactual for the services?

Question 3.2

- (a) What is the likely factual? What would be an appropriate designated roaming service and co-location service? How would the service compare to the services available under the counterfactual (in particular, in terms of pricing)?
- (b) How would such changes to the current specified services lead to long term benefits for end-users, which would not otherwise have been forthcoming? What empirical evidence is available to support such scenarios?
- (c) What is the interrelationship between the roaming and co-location services? How does the price of one service affect the other?
- (d) To what extent would amendments to the regulated service reduce barriers to entry?

Question 3.3

- (a) In principle, what benefits and costs do respondents consider would result from designating the services (that would not eventuate in the absence of such designation)?
- (b) Should these benefits and costs be evaluated in qualitative or quantitative terms (or a combination)? Is there any particular modelling approach that should be adopted to best evaluate the benefits and costs?
- (c) To what extent have parties themselves conducted or intend to conduct a quantitative assessment of the impact of designating roaming and co-location services in New Zealand (for example, by modelling the impact of designation on the business case of a new entrant)?
- (d) What empirical evidence is available from overseas jurisdictions on the impact regulating roaming and/or co-location services (or the threat of regulation) has made on new entry?

- (e) Do respondents have a view on how any interplay between roaming and co-location should be accounted for in the Commission's assessment of the benefits of any amendments?
- (f) Could one service act as a substitute for the other? If so under what conditions?

Chapter 4

Question 4.1

- (a) Should the requirement to cover 10% of the area in which the New Zealand population normally lives or works before accessing the roaming regulation still be in place?
- (b) If so, what should the 10% cover – population or area?
- (c) Should an access seeker still be obliged to commit to rolling out a national network?
- (d) If national roll-out is unnecessary, should there be a minimum roll-out (% of population) necessary?
- (e) Should roaming cease to be available in particular areas as a new entrant builds out its network?
- (f) Should there be a sunset clause for the provision of roaming?
- (g) Should the amended roaming regulation include 3G-3G roaming?
- (h) Do value-added services, as set out in the current roaming service description, include data services? Should data services be specifically included in the roaming service description?
- (i) What provisions need to be made to facilitate data roaming?
- (j) Are there any technical issues associated with voice roaming which the Commission should be aware of?
- (k) Are there any technical issues associated with data roaming which the Commission should be aware of?
- (l) Should inter-network roaming (roaming between different technology types) be considered?
- (m) Is inter-network roaming feasible within the time period usually used to assess new entry (2-3 years)? If so on what types of networks should the service cover?
- (n) If inter-network roaming is considered, does this affect the markets already defined? If so how?
- (o) What are the technical issues that need to be considered for inter-network roaming?

Question 4.2

- (a) What is the most appropriate pricing methodology for access to roaming services – retail-minus or cost-based?

- (b) If retail-minus, what would the various components of such a price look like (for example, what would be the appropriate retail price(s), would it be necessary to impute a retail price; what would be the avoided costs?
- (c) Should a single retail-minus price cover both voice and data? How should the retail-minus price be constructed to cover both voice and data?
- (d) If cost oriented pricing is the preferred pricing principle, is TSLRIC pricing the only viable option?
- (e) Would cost-based mobile termination rates be an appropriate benchmark for a cost-based roaming service?
- (f) What are the implications of each pricing principle (retail-minus and cost-based) in terms of promoting new entry?
- (g) In what ways could access seekers and access providers be encouraged to continue to invest, if a cost-based pricing principle was used? For example, would it be appropriate to have a roaming price that rises over time? If so, what are the appropriate bounds?
- (h) Should the pricing of voice roaming differ from that of data roaming? If so how?

Question 4.3

- (a) For each likely final pricing principle, what is the appropriate interim pricing principle that would provide an appropriate estimate?
- (b) Is benchmarking appropriate and practical?
- (c) Could cost proxies be used, and if so, which ones?
- (d) Is there a close relationship between roaming rates and mobile termination rates?
- (e) Would an estimation process be more appropriate to use in the situation where there are very few relevant benchmarks?

Question 4.4

- (a) What is an appropriate final pricing principle?

Question 4.5

- (a) Do respondents have any views on the wording of the other parts of a service specification for roaming and whether any new parts are needed?
- (b) What is the most appropriate description of an access seeker?
- (c) Should there be alignment between the access seeker and access provider definitions?
- (d) Should the definitions be more forward-looking to cater for fixed-mobile convergence?

Question 4.6

- (a) Should co-location pricing be based on a specified formula?

- (b) Could co-location be classified into a number of generic site types/forms?
- (c) Could a cost allocation formula be used to determine the price depending on the type/form?
If so how?

Question 4.7

- (a) How should the initial pricing principle be distinguished from the final pricing principle?
- (b) What is an appropriate interim pricing principle?
- (c) What is an appropriate final pricing principle?