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COMMERCE COMMISSION

Decision No. 393

Determination pursuant to the Commerce Act 1986 (the Act) in the matter of an application for authorisation of a business acquisition involving:

TeamTalk Limited

and

Telecom New Zealand Limited

The Commission:

M J Belgrave (Chairman)
Dr K M Brown
E M Coutts

Summary of

Proposed Acquisition:

The acquisition by TeamTalk Limited of the Trunked Mobile Radio business of Telecom New Zealand Limited.

Determination:

The Commission determines that it will grant an authorisation for the proposed acquisition pursuant to s 67(3)(b) of the Act.

Date of Determination:

15 May 2000

<p>CONFIDENTIAL MATERIAL IN THIS DECISION IS CONTAINED IN SQUARE BRACKETS []</p>
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THE PROPOSED ACQUISITION

1. Pursuant to section 67(1) of the Commerce Act 1986 (the Act), TeamTalk Limited (TeamTalk) gave notice to the Commission on 18 February 2000 (the application), seeking authorisation for the proposed acquisition by TeamTalk of certain mobile communication assets, comprising the trunked mobile radio (TMR) business branded "Fleetlink" (Fleetlink), of Telecom New Zealand Limited (Telecom).
2. The application is confined to the acquisition of Telecom's TMR assets, and does not extend to Telecom's paging and private mobile radio (PMR) assets. Authorisation would only apply to the acquisition of the TMR assets.

THE PROCEDURES

3. The application was registered by the Commission on 18 February 2000. Section 67(3) of the Act requires that the Commission, within 60 working days after the date of registration of the application, or such longer period agreed by the applicant, gives or grants, or declines to give or grant, a clearance or an authorisation for the acquisition. The 60th working day after the registration of the application is 17 May 2000.
4. On 9 November 1999, TeamTalk had given notice to the Commission, pursuant to section 66(1) of the Act, seeking clearance for a similar transaction (the proposed acquisition of the Paging services, Private Mobile Radio (PMR), Trunked Mobile Radio (TMR) and related equipment leasing activities of Telecom). On 3 December 1999, the Commission declined to give clearance for the proposed acquisition.
5. TeamTalk requested confidentiality for certain information contained in the application. In accordance with section 100 of the Act, the Commission made a confidentiality order prohibiting the publication or communication of that information for a period of 20 working days from the date on which the Commission makes a final determination. When the confidentiality order expires, the provisions of the Official Information Act 1982 will apply to the information that was subject to the order.
6. The Commission released a draft determination on 24 March 2000, in which it reached the preliminary view that it could be satisfied that the public benefits of the proposed acquisition were likely to outweigh the competitive detriments. The Commission stated that it was likely to grant an authorisation pursuant to section 67(3)(b) of the Commerce Act. Submissions were sought on the Commission's determination.
7. The Commission held a conference on 3 May 2000 to allow interested parties to make oral submissions on the Draft Determination.
8. The Commission received a late submission from Telecom at 5.34 pm the evening before the conference. Among other matters, Telecom sought the

Commission's guidance as to how the Commission might proceed if another party (presumably Telecom) were the applicant.

9. The Commission ruled that this was not a question that could be properly determined within the scope of Team Talk's application and it would require a fresh application from that other party.
10. The Commission's final determination is based on an investigation conducted by its staff, oral and written submissions from interested parties and subsequent advice from staff to the Commission.

THE PARTIES

TeamTalk

11. TeamTalk is 50 percent owned by Active Communications Limited (Active Communications) and 50 percent by Communications International Limited (Communications International). Active Communications is a wholly owned subsidiary of Active Equities Limited, an unlisted investment company of approximately 35 shareholders, none of whom own greater than 20 % of the shares either directly or indirectly. Communications International, whose only asset is its investment in TeamTalk, is jointly owned by five shareholders, each with a 20 % interest. Each of the shareholders of Communications International is either an employee or a director of TeamTalk.
12. TeamTalk is the owner and operator of a nationwide TMR network, providing mobile communications services.

Telecom

13. Telecom Corporation of New Zealand Limited is a publicly owned company listed on the New Zealand, Australian and New York stock exchanges. Telecom offers a range of telecommunications services including Internet, data communications, mobile and fixed telephony services. These services include cellular, paging and mobile radio networks.

INDUSTRY BACKGROUND

Mobile Communications in New Zealand

Overview

14. Mobile communications have been available in New Zealand since the 1940's. In the beginning conventional (or private) mobile radio was the only option for mobile communications. This provided the simplest of services – open broadcast of voice services over a radio channel.
15. Since the early 1980s global mobile communications have been revolutionised by advancing technology. In 1982 paging services were introduced to New Zealand, followed in 1987 by the introduction of analogue cellular services

using the US 'AMPS' cellular standard. Competition arrived with the introduction of competing GSM cellular services in 1993.

16. Globally the introduction of cellular has made mobile communications available to ever widening sections of the community. In its early years, cellular communications was expensive and purely a business tool. However, the trend now is towards mass ownership of cellphones. Some markets in Scandinavia have achieved cellular penetration¹ levels exceeding 50% of their population, while New Zealand is approaching 30%.
17. Expected developments include the proposed switch by Telecom from its AMPS/D-AMPS cellular system to a CDMA—Code Division Multiple Access—cellular network within two years, a standard that will provide expanded capacity and improved functionality. Satellite communications may also become a more economically viable option in the future.

Impact of Cellular on the Mobile Radio Sector

18. Industry participants spoken to by the Commission considered that the introduction of cellular had had a significant impact on the development of the mobile radio sector. Prior to the introduction of cellular, a number of mobile radio users were business people needing to be able to make mobile telephone calls. These users migrated to cellular, limiting the growth of the mobile radio business.
19. With the introduction of nationwide TMR coverage and increasing competition in mobile radio, the market had recovered in absolute terms, and has been growing at about 10% per year in terms of mobile radios in use². However, relative to the total mobile communications industry, mobile radio is now a small segment.

Mobile Communication Technologies - An Overview

20. The main types of mobile communication technologies available in New Zealand are mobile radio, paging, cellular and satellite-based systems. A brief overview of the main features of each technology follows. This is followed by an overview of mobile data, a particular application of mobile systems, and radio spectrum issues.

Mobile Radio

21. In its simplest form mobile radio communications, referred to as conventional or private mobile radio (PMR) can be between two handheld radios within line of sight and transmission range of each other. Establishing a single base station sited on a convenient high point can cheaply augment this coverage, allowing communications between users in a wider area over an open channel.

¹ Cellular penetration is measured as the number of handsets active on a network, divided by total population of the nation.

² However, this growth has occurred as a result of very significant discounting, which may not continue.

22. PMR can be established by users without the aid of a network service provider. Many users operate completely independent PMR systems. In some rural areas, co-operatives (user associations) have been established to share the costs of establishing the base stations to be used by members in their local area. Aside from private networks, service providers such as Telecom, or a number of smaller local mobile communications service providers can provide PMR services.
23. PMR systems are relatively inexpensive to operate, and are still favoured by users such as taxi companies. However, PMR lacks privacy and can only support a limited number of users; that is, it has a low system capacity. Furthermore, linking PMR systems to gain wide area coverage is not commonly done, as it is a relatively inefficient method of communication over greater distances.
24. Trunking is a technology that allows the combination of radio channels to increase the capacity that can be achieved from the same number of conventional channels, overcoming some of PMR's limitations. Relative to PMR, TMR allows more efficient network utilisation and is easier and less expensive to link to provide wide area coverage. It also provides privacy, centralised control of the network, ability to link with the PSTN and many cellular like features (for example caller identification).
25. Advantages of mobile radio in general include:
 - The ability to transmit immediately due to the fast call set-up or push to talk functionality.
 - Superior coverage of remote areas due to the power and siting of base stations.
 - Group calling; that is, the ability to call from one to many users.
 - Emergency call priority (TMR only). The ability to override network traffic and complete emergency calls. This feature is critical where life-threatening situations exist.
 - Centralised control of network. For example, it is possible to control costs by preventing or limiting calls to the PSTN from radios.
 - Can be a relatively inexpensive form of mobile communications, especially for localised use.
26. A major disadvantage of mobile radio, both PMR and TMR, is lack of capacity—large numbers of users cannot be supported. This means that it is difficult for mobile radio to supply mass communications markets, or to support some of the value added features common on cellular networks.
27. The functionality of mobile radio described above makes mobile radio ideally suited to “command and control” and dispatch operations. Common applications include:
 - transport operators
 - taxi / courier dispatch

- security operations
 - infrastructure maintenance
 - emergency services – Police, Fire, Ambulance.
28. Although difficult to measure precisely, as licences only record channels in use, there could be as many as 100,000 users of PMR in New Zealand at present. Telecom estimates that about [] of these users are facilitated by Telecom, small mobile communications dealers, or user associations. The balance provide their own service.
29. There are also approximately [] TMR users, with [] percent of these using either Telecom or TeamTalk as service providers. Telecom and TeamTalk both offer nationwide coverage. There are two significant regional TMR operators. MCS Digital RT Limited (MCS), based in Auckland, has about [] customers. T L Parker, based in Canterbury, has about [] customers. The remaining users subscribe to three small local operators, each with [] customers or less. In revenue terms, the mobile radio market for service providers in New Zealand is estimated to be [] million dollars per annum.

Paging

30. Paging provides one-way communication. In its early form, paging was simply by way of a ‘beeper’. This alerted the user to call into a central point, usually by locating a fixed network telephone. Modern paging systems deliver alphanumeric messages.
31. Paging systems are broadcast radio systems, and have good coverage. However, the key advantage is assurance of timely delivery. Delivery is immediate, unlike cellular message systems, which can, like e-mail, suffer some delay. For this reason pagers are still favoured for emergency services.
32. At present there are about [] paging service users. Most users subscribe to Telecom’s service, which is the only national paging network.
33. Two smaller companies—Page 1 Limited and Answer Services Limited—provide local networks in Whangarei, Auckland, Hamilton, Wellington and Christchurch. These companies also provide message services, which will deliver to other messaging platforms, such as cellular phones.

Satellite

34. Satellite communication has been used for many years for international communications. Until very recently, those communications were via geostationary satellites in high earth orbit. This required powerful earth based transmitters, limiting the application of satellite to mobile (handheld) communications. These systems had limited capacity and were generally expensive to use. Satellite communications have been favoured for very remote land based or maritime applications, where few other options are available. The commercially available INMARSAT service is an example of this type of satellite service.

35. A new generation of satellite mobile communications utilising low earth orbit satellites is coming into service. Iridium, the first such system to be launched commercially, was capable of handheld voice communications, as well as paging, messaging services and emergency communication services. Satellite services provide the ultimate level of coverage for operating in remote areas. However, the Iridium service did not prove to be commercially viable, and its failure may have jeopardised the launch of similar services in the medium term³.

Cellular

36. Cellular systems became commercially available during the 1980s, and in the 1990s have become the principal form of mobile communications⁴. Cellular systems overcome some of the capacity problems of mobile radio by constructing a network with numerous cell-sites, each with limited individual coverage. In stylised form, the architecture can be viewed as similar to a honeycomb structure. As each cell has limited coverage, frequencies can be reused more often, increasing capacity.
37. Original cellular systems used analogue radio transmission, relying on the cell structure for capacity. However, digital technologies can be used to further increase capacity and therefore lower the cost of service. The two major digital systems in use in New Zealand, D-AMPS (Telecom) and GSM (Vodafone), are TDMA—Time Division Multiple Access—technologies. These technologies deliver improved capacity, and a number of other benefits such as increased battery life, caller identification and the ability to receive short text messages. However, in New Zealand analogue (Telecom's AMPS network) still generally provides superior coverage for voice calls in rural areas.
38. Cellular systems were designed for person-to-person communications, and operate in a manner similar to fixed telephone networks. Call set-up is slow relative to mobile radio. While this is not significant to an average cellular user, it means that cellular is not suited to emergency service applications. Likewise, while 'group calling' can be established on a cellular network, it is achieved by setting up a conference call, which is much slower than a mobile radio broadcast to a group of users.
39. Cellular systems, by design, require large numbers of cell-sites to provide national coverage and hence demand significant capital expenditure. However, given the volume of users supporting the cellular networks, and the fundamental importance of the geographic coverage of mobile services, there has been a continual build-out of cellular coverage since the initial establishment of the service. As a result, cellular coverage now covers most populated areas and significant traffic routes in New Zealand.

³ Iridium notified the U.S. Bankruptcy Court in March 2000 that it had not been able to attract a qualified buyer by the court's deadline. Iridium then announced that it was terminating commercial service after March 17, 2000, and that it was beginning the process of liquidating its assets.

⁴ Cellular accounts for more than 80% of mobile communications users in New Zealand.

40. Cellular handsets are small and low powered, hence limiting the distance over which communication with the cell-site can be established. This can be improved by the use of vehicle booster kits that increase the power of the transmitter significantly. Commercial users who require good coverage while on the road commonly use such kits. Nonetheless, for reasons associated with transmitter power and location of cell-sites, cellular systems do not provide the same level of coverage available via mobile radio in some remote areas.

Mobile Data

41. Mobile communications are most commonly used for voice communications. However, applications involving the transmission of data over a wireless network are increasing, and are expected to become more important over time.
42. Messaging services, such as those delivered to pagers or cellphones, are an example of data over a wireless network. Industrial telemetry applications, such as remote monitoring of machinery, are also increasing. These services can be delivered over a variety of wireless technologies, including paging, mobile radio, and cellular networks. Dedicated mobile data networks exist. Telecom's CDPD (Cellular Digital Packet Data) is an example. A key advantage of mobile radio and cellular systems is that data applications can be utilised over a platform that also provides for two-way voice communication.
43. Telecom and TeamTalk stated during the conference that they offered or intended to introduce a range of data services on their TMR platforms.

Radio Spectrum

44. The Radio Spectrum Management Group of the Ministry of Economic Development (MED) is the issuer and administrator of radio spectrum licences within New Zealand. The radio spectrum under MED management operates at frequencies lower than 3000 Gigahertz (GHz).
45. Access to radio spectrum is an essential requirement for the operation of any form of mobile or wireless communication service. Spectrum is a limited resource and, as technology advances and market demands change, it is necessary to open and close bands of spectrum to certain operations over time. This process can be slow, as it requires balancing historical precedent and incumbency rights with the need to move forward and allow new applications.
46. Limited spectrum is available for nationwide TMR operations. Dedicated spectrum for use by TMR systems in New Zealand is in the 400 MHz (TD) band, and 800 MHz (TS) band. Equipment used in each of these bands is incompatible with use in the other band, and as a result switching between networks on different bands is costly for mobile radio users.
47. Significant congestion issues exist in the mobile radio—TD and TS—bands in the Auckland and Waikato regions. During the clearance process, MED advised that no significant new competitor would be able to enter the TMR

network business on a national basis utilising either the TD or TS bands. However, spectrum could be found for localised operations throughout New Zealand.

48. In March 2000, the Ministry of Economic Development issued a document seeking views on replanning of the 401-449MHz band, including bands used for mobile radio services. The document raised the possibility of augmenting the spectrum available for these services, and raised the possibility of spectrum being made available for digital mobile radio.

THE RELEVANT MARKETS

Introduction

49. The purpose of defining a market is to provide a framework within which the competition implications of a business acquisition can be analysed. The relevant markets are those in which competition may be affected by the acquisition being considered. Identification of the relevant markets enables the Commission to examine whether the acquisition will breach the threshold of anti-competitiveness set out in Section 47(1) of the Act by leading to the acquisition or strengthening of a dominant position.
50. Section 3(1A) of the Act provides that:
 "...the term 'market' is a reference to a market in New Zealand for goods or services as well as other goods or services that, as a matter of fact and commercial common sense, are substitutable for them."
51. Market definition principles have been set out by the High Court in *Telecom Corporation of NZ Ltd v Commerce Commission* (the AMPS A case):⁵

"First, and most generally, we seek to identify the area or areas of close competition of relevance for the application(s). In other words, we seek to identify the constraints upon the price and production policies of firms whose conduct is of relevance for the matters litigated. In this matter it is of special importance to highlight the constraints upon Telecom's price and production policies.

Secondly, competition may proceed both through substitution in demand and substitution in supply in response to changing prices or, more comprehensively, the changing price-product-service packages offered The mental test that prompts a summary evaluation of the evidence is to ask how buyers and sellers would likely react to a notional small percentage increase in price of the products of interest, eg the standard telephone service, the cellular service (the 'price elevation test'). ...

Thirdly, the market is a multi-dimensional concept – with dimensions of product, space, functional level, and time. Here we need to give special attention to the principles that should govern the isolation of the dimensions of function and time.

If we ask what functional divisions are appropriate in any market definition exercise the answer, plainly enough, must be whatever will best expose the play of market forces, actual and potential, upon buyers and sellers."

⁵ (1991) 4 TCLR 473, 502; 3 NZBLC 102,340, 102,362.

52. Markets are defined in relation to product type, geographical extent, and functional level. With the first two dimensions, market boundaries are determined by testing for substitutability, in terms of the response to a change in relative prices of the good or service in question and possible substitute goods or services. A properly defined market will include products which are regarded by buyers as being not too different ('product' dimension), and not too far away ('geographical' dimension), and are thus products to which they could switch if a small yet significant and *non-transitory* increase in price (*ssnip*) of the product in question were to occur. It could also include those suppliers currently in production who are likely, in the event of such a *ssnip*, to shift promptly to offer a suitable alternative product even though they do not do so currently. However, supply-side factors are not generally considered by the Commission in the definition of markets, but are considered at a later stage as part of the process of identifying market participants, including "near entrants", and in the consideration of the constraints from market entry.
53. The Commission's *Business Acquisition Guidelines* suggest the use of a *ssnip* test to provide a framework for testing for substitutability, and hence for determining the boundaries of a market as a matter of fact and commercial common sense.⁶ In regard to product market definition, the following question is posed: if the price of the product were to be raised by a hypothetical monopolist by a small yet significant non-transitory increase in price (say, five percent) above the competitive level for at least a year, would buyers switch to buying alternative products (demand-side substitutability)?
54. If little or no such switching occurs, then the product as defined has no close substitutes, and it falls within a separate product market. On the other hand, if widespread switching takes place, the products to which buyers' switch can be considered to be close substitutes for the initial product. These products are then added to the initial product, and the new, enlarged, product definition is subjected to the same test. This process continues until no significant switching occurs in response to the increased price. The boundaries of the product market are therefore identified. The product market so arrived at should occupy the smallest range of products consistent with a hypothetical monopolist being able to exert market power, as defined by the *ssnip* test.
55. The *ssnip* test is also used to gauge the geographical extent of the market. The process starts by taking one small district or region as appropriate, and considering whether a hypothetical monopolist of the product in that area, if it were to impose a *ssnip* as defined above, would lose so many customers to suppliers of the product outside that area that the price increase would be unprofitable. An absence of switching may indicate that the suppliers in other areas cannot provide substitute products, in which case the area initially specified would constitute a separate geographical market for the product. On the other hand, the presence of widespread switching would show that suppliers in other areas provide a product which is an effective substitute and, therefore, that the geographical extent of the market is broader. The test would then be repeated with the broader geographical area, and this process

⁶ Commerce Commission, *Business Acquisition Guidelines*, 1999, at pp. 14-15.

would continue until significant switching outside of that area in response to the price rise ceases. Once again, the geographical market for a product is the smallest geographical space in which a hypothetical monopolist could exert market power.

56. In addition, markets are also defined in relation to functional level. Typically, the production, distribution, and sale of products proceed through a series of functional levels. For example, that between manufacturers and wholesalers might be called the “manufacturing market”, while that between wholesalers and retailers is usually known as the “wholesaling market”. The levels affected by this proposal have to be determined as part of the market assessment.
57. In practice, the process of defining markets is unlikely to be as precise and scientific as suggested by the *ssnip* test. However, in the Commission’s view, the *ssnip* approach provides a useful framework for assessing the question of what other products, or products from other areas, are substitutable for the product in the area in question as a matter of fact and commercial common sense. The test simply provides a means within which judgments on a case-by-case basis, using whatever information is available or can readily be generated, have to be made. The issue remains one of substitutability in response to a price increase, and so evidence relating to the price elasticity of demand, the behaviour of buyers, the availability of technically suitable alternative products and informed opinion from various sources all provides useful information. This has been the approach used with regard to this proposal.
58. In this application, and following investigation of the proposed acquisition by TeamTalk, the Commission considers that the relevant area of aggregation is in the provision of TMR network services.

The National Market for TMR Network Services

Product Dimension of the Market

59. The proposed acquisition affects the supply of TMR network services. TeamTalk has argued in the application that the relevant market is the ‘mobile communications services’ market, which includes a number of products, which can be substituted for each other. These include PMR, TMR, cellular and paging. In addition to these, satellite-based communication services might also be considered a substitute for one or more of the above mentioned products.
60. Fixed network services, either wire or wireless, are not considered potential substitutes as they lack the prime feature of any mobile communications service – mobility.
61. In defining the relevant markets, the Commission has therefore given consideration to the potential for PMR, paging, cellular and satellite based mobile communication services to provide acceptable substitutes for TMR

services.

Private Mobile Radio Services

62. PMR lacks coverage and privacy, but for a significant portion of mobile radio users it is inexpensive and effective. PMR provides two of mobile radio's most distinctive benefits, 'one-to-many' group communications, and fast 'push-to-talk' functionality, and therefore remains popular for localised uses.
63. PMR is relatively easy to establish by private users, especially if only one base station is required. Estimates⁷ provided by the industry suggest that perhaps [] mobile radios operate on private PMR systems.
64. PMR as a technology is not well suited to coverage over wide areas. Due to the cost of establishing wide area networks, commercial service providers employing trunking technologies usually cater for these needs. Even if a small radio operation is required that might be served with PMR, if the application is essential to the organisation, it is likely that a network operator will be used to ensure 24 hour technical support of the system. A TMR network may also be chosen where security or other value added functionality requirements are present.
65. Telecom has supplied wide area coverage services with PMR to two significant customers with specific needs. During the clearance process undertaken in relation to this acquisition in 1999 ("the clearance"), Commission staff spoke with another significant corporate that operates its own national PMR system—constructed to suit its own needs. The Commission understands it is technically possible to provide such systems if required, but that it is not an economic option compared with use of the national trunked networks. PMR therefore is not considered a close substitute for wide area mobile radio operations.

Paging Services

66. Paging is a form of one-way communication, varying from simple tone based paging through to alphanumeric messaging. Paging services are still preferred by a small but significant section of users of mobile communications. In particular, they are likely to remain in favour with some emergency services, as the paging system architecture provides a high level of assurance of message delivery, with little or no time delay.
67. Pagers are a delivery platform used to receive some form of message. With the advent and growth of message delivery functionality over cellular, many users are moving to cellular. For this reason the pricing of paging services is constrained by cellular pricing. However, paging service operators spoken to by the Commission during the clearance (Page 1, Telecom) did not generally consider mobile radio services as a direct competitor.

⁷ It is difficult to establish exact numbers, as PMR is simply open channel communications. The number of channels in use is known, but not the number of users.

68. The Commission concludes that paging services are not a close substitute for mobile radio services.

Satellite

69. Satellite, like cellular, is designed for one-to-one communications, and has similar functionality issues to cellular, with the exception of coverage. Satellite provides the best coverage of any remote area system. For those customers with coverage requirements that currently have no option other than mobile radio, and where functional requirements are not restrictive, the major issue with satellite is cost. Equipment costs and usage charges do not make satellite a close substitute for mobile radio at this time.

Cellular Services

70. Cellular services provide two-way voice and data communications, and in the Commission's view, are likely to provide the closest substitute for mobile radio services. The question of product substitutability has two dimensions – functional and economic.

Cellular – Functional Substitutability

71. It is arguable that one of the most important functional attributes of any mobile communication service is geographic coverage. The importance of this attribute can be seen in the marketing efforts of cellular operators dedicated to selling the coverage benefits of their networks. Given the importance of coverage as a competitive advantage, both Telecom and Vodafone have continued to build out cellular coverage.
72. The applicant submits that cellular has now achieved close to competitive parity with mobile radio in terms of coverage. Telecom stated during the clearance process that mobile radio was still best for rural areas, especially in the South Island through to the West Coast. Comparison of coverage maps for Telecom's TMR service with Telecom analogue cellular, which generally provides superior coverage to digital, suggests that mobile radio still has an advantage in some rural locations. By comparison, for most areas with significant population or on main highways, mobile radio would appear to have little or no coverage advantage.
73. The Commission's investigations suggest that while in some areas mobile radio has an advantage in coverage, in other areas cellular has an advantage. A major user of mobile radio services stated that this was the case for their South Island operation. However, for some users the difference is significant. For example, a company in the electricity industry stated that cellular would never provide the coverage or security of operation of the national mobile radio service currently used.
74. Given the competitive pressures to continue building out cellular coverage, it seems reasonable to assume that mobile radio will struggle to maintain a

significant coverage advantage except in some remote locations. The Commission understands that while, in terms of coverage, mobile radio and cellular are likely to be reasonable substitutes for some mobile radio users, there are also customers for whom this is not the case.

75. For other areas of functionality, there are significant differences between systems. Industry participants spoken to highlighted the following as the key differentiators of mobile radio:
- group calling,
 - channel monitoring,
 - fast call set-up/push to talk,
 - emergency call override.
76. Group calling is considered one of the most distinctive features of mobile radio. For PMR, the nature of mobile radio where a call is broadcast over an open channel, provides the ability for all parties listening to a channel to receive that broadcast. Cellular, by contrast, is designed for person to person communications. This group calling feature is useful for applications that require this group sharing of knowledge (taxis and security firms are good examples). Telecom stated that this was a useful feature in command and control application, though it also stated that in its view this was becoming less of a requirement over time. On the other hand, MCS stated that the group calling facility was one of the key attractions of its service for customers.
77. Channel monitoring is the ability to listen in to communications on the mobile radio network. Industry participants considered this is very useful for companies that use mobile radio as a ‘command and control’ tool, where the ability to monitor allows an overview of operations to be maintained without continual checking of individual stations.
78. Fast call set-up refers to the fact that with a mobile radio it is often possible to simply ‘push and talk’, without delay in dialling or call set-up. This is important in situations where immediate communications may be required, such as security applications, or where frequent short communications are made.
79. Emergency call override enables an emergency call to interrupt other traffic and guarantee immediate communication. Users involved in services with the possibility of life-threatening incidents occurring considered this an essential feature.
80. During the conference, Telecom also suggested that for certain kinds of data applications, mobile radio had a “window of opportunity” of about two years in which it could offer such services more effectively than cellular.

Conclusion on Functional Substitutability of Cellular

81. For a number of applications cellular does not provide a suitable alternative in functional terms. Both network operators and customers spoken to by the

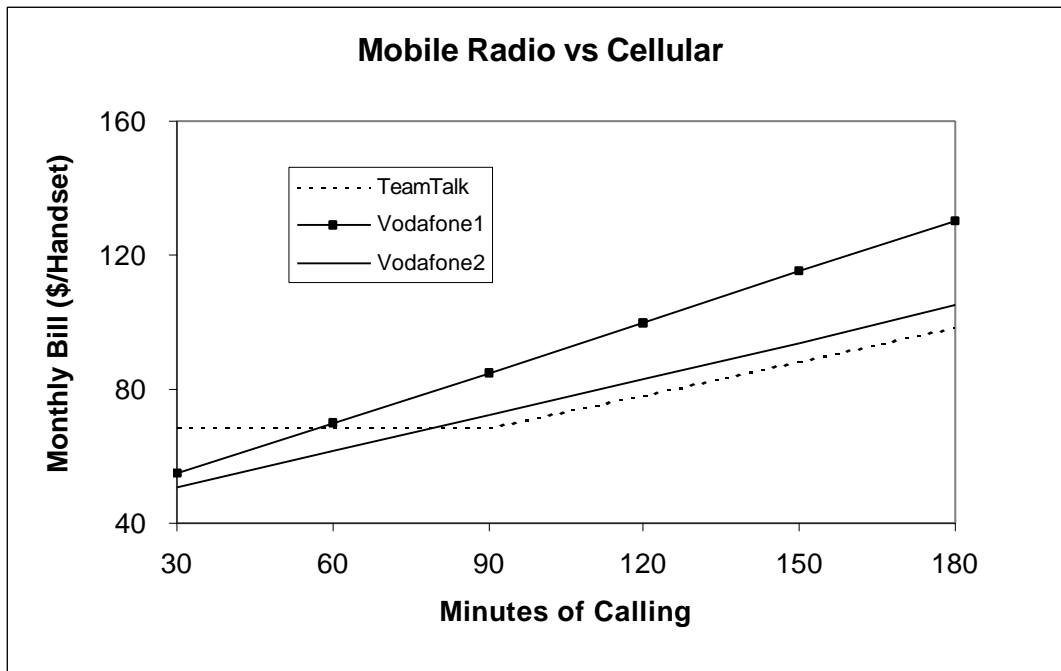
Commission during the clearance were generally of the view that customers that required these functions would continue with mobile radio, and would in time move to new generation mobile radio solutions, rather than to cellular solutions because of the dependency on these functions. In particular, the utility and emergency services customers would be likely to continue using mobile radio solutions. Likewise the customers who value group calling, such as users of the MCS service, are unlikely at this time to find cellular an acceptable substitute.

Cellular – Economic Substitutability

82. Economic substitutability refers to whether a product is a cost-effective substitute. For mobile communications the prices need not be identical—as different products have different features—as long as the price value trade off is acceptable⁸.
83. Most parties spoken to by the Commission during the clearance were of the view that mobile radio was much cheaper than cellular, and therefore cellular was not a substitute in terms of cost.
84. Industry participants spoken to by the Commission during the clearance stated that there was movement of customers between mobile radio and cellular. However, in many cases these parties also argued that some customers returned to mobile radio either because cellular, in practice, did not deliver the functionality mobile radio had, or because of cost over-run.
85. Pricing comparisons are also difficult in that companies suffering cost over-runs after moving to cellular referred to customers with local needs as much as national. For these customers PMR/TMR are very much cheaper, as local mobile radio coverage is considerably cheaper than national. Cellular call plans, on the other hand, do not currently differentiate on distance – all calls are ‘national’. Furthermore, cellular prices have fallen over time, and especially in the last year or so.

⁸ For example, a paging solution may need to be significantly cheaper than a cellular messaging solution, as a cellphone offers the benefit of immediate two-way communication when required.

86. For national mobile radio calling plans, compared with cellular, the issue is less clear-cut—as shown in the following graph:



87. The graph compares current prices for national coverage from TeamTalk, with Vodafone's current Group User Plan⁹. Vodafone's plan varies the price per minute depending on total number of minutes used by the group. 'Vodafone1' uses the highest per minute rate, while 'Vodafone2' uses the lowest. While TeamTalk appears slightly cheaper, mobile radio equipment is significantly more expensive than cellular handsets, and cellular is cheaper if a significant portion of calls are made to the fixed network.
88. This price comparison is intended to show only that cellular, at list prices, is becoming a potential economic substitute for some users requiring national coverage. However, there are other economic issues. For example, a number of organisations spoken to considered that it was easier to control costs of a mobile radio operation, as central limitations can be more easily placed on mobile radios. For example, mobile radio systems can limit the ability of individual radios to access the fixed network.
89. At the conference, Telecom accepted the Commission's draft view that cellular and mobile radio were not head-to-head price competitors. Telecom submitted that there was a price/quality trade off, and that falling cellular prices made reduced quality an acceptable trade-off for TMR customers. Telecom stated during the conference that fixed prices were traditionally one of the attractive features of mobile radio compared to cellular. Telecom was about to introduce a variable pricing plan for its mobile radio customers to match cellular offerings. Nonetheless, other evidence from Telecom at the conference suggested that competition from cellular was at an early stage, and

⁹ A plan for groups of five or more users, where total minutes used by the organisation are pooled.

that it was not regarded as a competitor for TMR on a day-to-day basis¹⁰.

90. This analysis tends to suggest that for some customers of national trunked mobile radio, cellular is an economic substitute, depending on customer calling patterns and functionality requirements. It is forecast that cellular prices will continue to fall. As technology costs fall and given the strategic intent of incumbent cellular operators, this assumption would appear reasonable¹¹. However, the Commission notes that reliance on such a forecast requires it to assume continuation of the current business strategies of the incumbent cellular companies.

Conclusion on Economic Substitutability of Cellular

91. The Commission concludes that cellular may provide an economic substitute for some, but not all, customers of wide area TMR services.

Conclusion on Substitutability

92. The oral submissions provided at the conference suggest that there is a spectrum of TMR users. While it is clear that in some cases cellular will provide a suitable economic and functional substitute, it is equally clear that some customers will be captive to mobile radio, and it is likely that others will find cellular an inadequate substitute, even given a trade-off between price and quality.
93. The Commission notes that, given changing technology, cellular and other alternatives may become substitutable for TMR in the future. TeamTalk stated at the conference that it expected that within one to two years a new entrant would announce that it was going to roll out a digital technology that would supersede TeamTalk's. However, the Commission considers that the time frame for such changes is too uncertain to consider these alternatives as substitutes for the purposes of this application.
94. The Commission considers that, for the purposes of this application, a trunked mobile radio market is the appropriate market for analysis.

Functional Dimension of the Market

95. Both TeamTalk and Telecom operate national trunked mobile radio networks, and undertake both direct sales and service functions. Both networks also connect customers via independent dealers, who are not exclusive, although some have chosen to sell one network exclusively. Sales via dealers are on a

¹⁰ Mr Harding (Telecom), Conference Transcript p.47:

Already in the marketplace we're starting to see a migration from TMR over to cellular, and while we don't normally compete on a day-to-day basis, like we don't get a company ringing up saying I've been offered this price on cellular and you are charging me this price on TMR, are you going to match it. What we typically find is, a person cancels their service and, when we find out why they cancelled it, the answer is the equipment is just not used any more. I strongly suspect that most of those people have gone to cellular.

¹¹ Telecom has publicly declared that it would like to push cellular penetration to 50% of the New Zealand population within two years.

commission basis, and the customer is connected directly to the chosen network. Dealers benefit from the commission from the network, and margin on installation and hardware sales.

96. The competition impacts of this proposed merger, if any, stem from the amalgamation of the competing networks. Therefore the market for TMR network services is considered relevant to the analysis of this application, where the services referred to include the provision and operation of the network, and direct sales and service activities.

Geographic Dimension of the Market

97. Two national TMR networks, TeamTalk and Telecom, serve the mobile radio market and operate in the 400 MHz (TD) band. An Auckland based company operating in the 800 MHz (TS) band—MCS—has a TMR network that covers much of the North Island with the exception of Wellington, and smaller operators are present in each of Auckland, Wellington and Christchurch. T L Parker, operating in Christchurch, also operates in the 800 MHz (TS) band. Furthermore, a substantial number of users are on private mobile radio networks provided by Telecom, smaller communications operators, user associations or their own systems.
98. The proposed acquisition involves the merger of the two national networks. However, these networks serve users with local, regional, island wide and nationwide coverage needs. While a key differentiator of TMR networks is their ability to provide wide area coverage at an economic cost, it is the regional, island and nationwide impacts that are of relevance in analysing this application.
99. MCS has competitive coverage in the northern half of the North Island. It could therefore be argued that this should be analysed as a separate market. However, while MCS provides a competitive option for some customers, major customers of nationwide TMR often have a combination of regional, island wide and national needs.
100. For these reasons, and as the defining feature of these operators is their national coverage, the Commission concludes that a national market is the appropriate market for analysing the proposal.

Conclusion on Market Definition

101. The Commission concludes that, for the purpose of analysing this application, the appropriate market is the National Market for TMR Network Services.

COMPETITION ANALYSIS

Overview

102. Section 67(3) of the Act, when read in conjunction with s 47(1) of the Act, requires the Commission to give clearance for a proposed acquisition if it is satisfied that the proposed acquisition would not result, and would not be likely to result, in a person acquiring or strengthening a dominant position in a market. If the Commission is not so satisfied, clearance must be declined, although it may still grant an authorisation for the acquisition under s. 67(3)(b) of the Act.
103. Section 3(9) of the Act states that a person is in a “dominant position” in a market if:
- “... a person as a supplier or an acquirer of goods or services either alone or together with an interconnected or associated person is in a position to exercise a dominant influence over the production, acquisition, supply, or price of goods or services in that market . . .”
104. That section also states that a determination of dominance shall have regard to:
- market share, technical knowledge and access to materials or capital;
 - the constraint exercised by competitors or potential competitors; and
 - the constraint exercised by suppliers or acquirers.
105. In reaching a view on whether a person is in a position to exercise a dominant influence in a market, the Commission considers this non-exhaustive list of factors, and any other relevant matters which may be found in a particular case.
106. In the Commission’s view, as expressed in its *Business Acquisition Guidelines 1999* (p.17), a dominant position in a market is generally unlikely to be created or strengthened where, after a proposed acquisition, either of the following situations exist:
- the merged entity (including any interconnected or associated persons) has less than in the order of a 40 percent share of the relevant market; or
 - the merged entity (including any interconnected or associated persons) has less than in the order of a 60 percent share of the relevant market and faces competition from at least one other market participant having no less than in the order of a 15 percent market share.
107. In *Port Nelson Ltd v Commerce Commission* [] 3 NZLR 554, the Court of Appeal approved the following dominance standard, adopted by McGechan J in the High Court:
- “... dominance involves more than ‘high’ market power; more than mere ability to behave ‘largely’ independently of competitors; and more than power to effect ‘appreciable’ changes

in terms of trading. It involves a high degree of market *control*.” (emphasis in original)

108. Each of the relevant markets is considered below to assess whether the proposed merger might lead to the acquisition or strengthening of a dominant position.

The National Market for TMR Network Services

Market Concentration

109. The following table gives an estimate of market share by handset in use:

TMR – National Market Share (by handset)		
Telecom	[]	[] %
TeamTalk	[]	[] %
MCS	[]	[] %
T L Parker	[]	[] %
Other	[]	[] %
Total	[]	

110. The proposed combined entity would control [] percent of the market on a national basis. Data supplied to the Commission indicates that approximately half of the customers using either Telecom or TeamTalk TMR use wide area or national coverage services, or about [] mobile radios.

Constraint from Existing Competition

111. MCS provides an alternative for users of TMR services in the northern part of the North Island. However, MCS has limited coverage in the lower North Island, and none in the South Island. Furthermore, MCS has limited radio spectrum available to it¹². For customers that could use MCS, a significant cost would be incurred in changing their radio equipment to the 800 MHz equipment used by MCS’ network¹³.
112. T L Parker, which also operates in the 800 MHz band, covers the Christchurch and Canterbury plains area immediately adjacent to Christchurch¹⁴. As a regional operator, T L Parker does not compete for customers requiring wide area South Island, or national coverage.
113. PMR customers are an important source of growth in the TMR market. MCS Digital noted at the conference that 30% of its growth came from customers switching from PMR to TMR.

¹² Data supplied by MED indicate that, of all spectrum available for provision of TMR services, MCS holds [] percent of the spectrum.

¹³ This would not be an issue for a company upgrading its entire fleet of radios. However, mobile radios have very long service lives—10 or more years—so such upgrades would be rare.

¹⁴ Coverage is from Ashburton in the south, to Amberley in the north.

114. PMR services are an option for many local mobile radio users, some of which have chosen to use TMR. However, as discussed in the market definition analysis, PMR is not generally suited to supplying cost effective wide area coverage. The Commission is therefore of the view that the option to provide wide area coverage via PMR would not provide significant constraint on the proposed single national TMR service provider.

Tetra

115. The applicant has argued that a new digital mobile radio system—Tetra—being constructed by the New Zealand Police could provide a commercial alternative.
116. Discussion of the Tetra system with the Police, Ministry of Economic Development and industry participants during the clearance would suggest the ultimate form of any future Tetra network is highly uncertain. Tetra is likely to cover Auckland, and perhaps the major urban centres, though this is uncertain. In either case, as it is a digital system with excellent data but poor coverage capabilities, it will not be used to provide wide area national coverage. It was further suggested by a number of industry participants, that should Tetra ever become commercially available, it would be more expensive than alternative commercial systems. Finally, for security reasons, it is unlikely to be available to commercial users in the foreseeable future.

Satellite

117. From the Commission's enquiries, the most critical functionality issues that keep some users of wide area mobile radio captive to this product are remote coverage, and the security of service features that are needed for situations where life may be at peril. Satellite is, theoretically, in a position to compete on these features.
118. The key to satellite then is its economic substitutability. The cost of the system has two parts to the user, the terminal equipment, and actual usage. In the South Pacific, with low capacity utilisation, service pricing could be quite flexible. However, the equipment is relatively expensive. While prices will fall over time, satellite phones are likely to remain relatively expensive for some time.
119. The cost of satellite services could change at short notice. However, the Commission is not in a position to forecast or speculate on the likely market strategy of satellite operators. The Commission also notes that the Iridium service is no longer available. As a result, the Commission does not consider satellite a strong constraint at this time, nor give it significant weight for the immediate future.

Cellular

120. Information received by the Commission during the clearance suggests that a large portion of current wide area trunked mobile radio services use the

service primarily for station-to-station communications. Use of the group calling functionality is not particularly common among customers of Fleetlink and TeamTalk, although it is an attractive feature for MCS customers.

121. This suggests that for many users cellular will be an option. This is particularly the case where a significant proportion of the customers calls are to parties outside of the customer's fleet. [] Both Telecom and TeamTalk were able to provide examples of customers that had switched to cellular.
122. Against this, the Commission also identified customers that would not be able to switch to cellular. The reasons were functional, related to remote area coverage, emergency calling, and group calling.
123. It seems likely that cellular will be an option for a segment of users, at least in terms of functionality. For some, it would also be a suitable economic substitute.

Price Discrimination

124. The discussion of product substitution possibilities was undertaken to attempt to define which products form realistic substitutes for national trunked mobile radio services. Should substitutes be available, if sufficient substitution would occur to make a 5 percent price rise unprofitable, as defined in the *snip* test, then those other products are considered to be part of the same market.
125. In many cases where product markets need to be defined, some customers will be able to switch between product A and product B, while others cannot, and are therefore captive. The important question is whether substitution by the non-captive customers will prevent a monopolist charging prices above competitive levels.
126. Even if the proportion of captive customers is small, the monopolist may be able to set monopolistic prices if it can discriminate between different customers, charging higher prices to those who are captive, and lower prices to those who are not.
127. Telecommunications markets are notable for price discrimination. Charges vary by distance, time of day, length of call, individual customer and many other factors. In mobile communications, charges can be varied in numerous ways. Furthermore, significant customers are often dealt with on an individual basis by the network operator, allowing specific tailoring of the service package, including pricing, to the individual customer.
128. TeamTalk argue that price discrimination would not be possible for a TMR operator, because captive customers cannot be easily identified, and can in any case avoid price increases through such strategies as joining industry groups which benefit from discounts. MCS said at the conference that its TMR customers particularly valued group calling, a feature not offered by cellular

operators, and that it could price its service at a premium unconstrained by a competitive threat from cellular¹⁵.

129. The Commission heard a range of views during the conference on whether cellular would be a substitute for TMR. MCS argued that an overall price rise would be possible for a merged entity, because cellular would not be a suitable substitute for most TMR customers. Telecom gave evidence that it considered that a merged entity would not raise prices, because of competition from cellular, although the downward pressure on TMR prices created by competition from TeamTalk would probably cease.
130. Other things being equal, cellular would provide some competitive constraint on the proposed entity. There is a small but significant segment of mobile radio customers, identifiable by industry segment, that are unable to use any other service. The Commission is not satisfied that competition from cellular will provide these customers with protection from the potential for the merged entity to exercise market power.
131. The evidence on the constraint provided by cellular for TMR customers as a whole is not clear. An increase in price by the merged entity might be linked to better service offerings. However, evidence given by Telecom during the conference suggested that congestion constraints would limit the opportunities for offering significantly better services in Auckland. In any case, the Commission considered that the merged entity would not need to offer better services as a trade-off for increased prices.
132. The Commission considers that competition from cellular would put an upper limit on across-the-board price increases for TMR customers, but it is not satisfied that such competition would constrain the merged operator from implementing a *ssnip*.

Conclusion on Constraint from Existing Competition

133. The Commission concludes that existing competition can only provide a limited constraint on the proposed merged entity.

Constraint by Potential Competition

134. A business acquisition is unlikely to result in any person acquiring or strengthening a dominant position in a market if behaviour in that market continues to be subject to significant constraints from the threat of market entry.
135. The Commission accepts that potential competition can act as a constraint on business activity. An assessment of the nature and extent of that constraint is an integral part of the Commission's assessment of competition and market dominance.

¹⁵ MCS stated that they could price at a premium in relation to other TMR operators because of the congestion on those networks, particularly in Auckland.

136. In order for the threat of market entry to be a sufficient constraint on the exercise of market power, the Commission’s approach is based on the “*lets*” test. Under this test, to constitute a sufficient constraint, entry must satisfy all four of the following criteria: it must be *likely*, sufficient in *extent*, *timely* and *sustainable*.¹⁶ Following consideration of the barriers to entry in the national market for TMR network services, constraint imposed by potential entry is assessed against the *lets* test.

Barriers to Entry

137. The potential for entry to the TMR market on a national basis is subject to three main issues or potential barriers:
- Availability of radio spectrum
 - Access to suitable radio sites, and
 - Sufficient market size.

Each of these issues is discussed in turn.

Access to Radio Spectrum

138. Dedicated radio spectrum for TMR is available in both the 400 MHz (TD) band and 800 MHz (TS) band. The right to use spectrum is given by way of a licence issued to use a given channel within a stated geographic location. Channels are therefore reused in different areas of the country. The following table provides an overview of current spectrum allocation shares:

TMR – National Share of Radio Spectrum (400 and 800 MHz)		
Telecom	[]	[] %
TeamTalk	[]	[] %
MCS	[]	[] %
Other	[]	[] %
Total	[]	

139. The combined entity would control about [] percent of all available trunking spectrum, including both the 400 and 800 MHz bands. Furthermore, for the 400 MHz (TD) band, it would control [] percent of the available spectrum. This is significant, as operators can change easily between Telecom and TeamTalk’s 400 MHz networks. However, moving between 400 and 800 MHz networks—such as those operated by MCS and T L Parker—would require new equipment to be purchased.
140. As discussed earlier, localised spectrum is available throughout New Zealand. Discussions with MED suggest that, although in theory a national TMR network operating in the 400 MHz (F) band could be established, limited

¹⁶ Commerce Commission, *Business Acquisition Guidelines*, 1999, pp. 19-20.

channels are available in this band. In addition, some channels are already allocated.

141. Radio spectrum is subject to incumbency rights. This means that if the MED wishes to move an incumbent operator, it must provide alternative spectrum. Even if alternative spectrum exists, moving is likely to be resisted by incumbents, as changing to new frequency bands requires significant investments in new equipment, both for the network operators and customers.
142. The Ministry of Economic Development advised during the clearance that spectrum issues would mean it is unlikely that a significant new competitor would be able to establish itself in Auckland. The recently released proposals on replanning of the 401-449MHz band may offer some opportunities for new entrants, although MED has indicated that new spectrum is likely to be for non-commercial use.
143. There is some uncertainty about the availability of spectrum for new entrants, at this early stage of the replanning process. The possible availability of additional spectrum may ultimately lessen the barriers to entry for new entrants. Because of the level of uncertainty, the Commission will not rely on new spectrum becoming available, and will continue to assume that lack of radio spectrum provides a significant barrier to entry for the foreseeable future.

Access to Radio Sites

144. Construction of a national TMR network at minimum cost would require access to the best sites for radio stations currently available. Some industry participants indicated that this had been a problem in the past, as both Telecom and BCL¹⁷—the main owners of suitable sites—were in the mobile radio business.
145. [] BCL has advised that it would provide access to any party where technically feasible on suitable commercial terms.
146. The Commission therefore concludes that access to suitable radio sites is unlikely to be a significant barrier to entry.

Market Size

147. Whether entry to a market is likely to occur on a significant scale requires the entrant to consider it likely that the business will be profitable in the long term. In network industries, this requires achieving sufficient network utilisation to make the network economic. This is a function of both the size of the overall market, and the market share that can be gained.

¹⁷ Broadcast Communications Limited (BCL) is a wholly owned subsidiary of Television New Zealand. It is a provider of services to operators of broadcast and telecommunications networks, including the provision of “co-siting” services to television and radio broadcasters and the operators of telecommunication networks for a fee.

148. Most industry participants spoken to questioned whether construction of another national trunked mobile radio network would be economic. It was suggested that many areas of the country, given the small size of the market, were close to a natural monopoly¹⁸ for such services. Telecom stated that its TMR network [].
149. Against this, scale entry has occurred in the past, both from TeamTalk itself, and from MCS. This appears to have occurred against an expectation that PMR users would lose their spectrum and need to migrate to a trunked solution, a migration that has not eventuated. At this time there is no indication that such a forced migration, which would significantly expand the market, is likely to occur.

Conclusion on Barriers to Entry

150. The Commission concludes that the size of the market, combined with competition from competing technologies in significant segments of the market, would raise issues of whether scale entry would be commercially viable.

Conclusion on Constraint by Potential Competition

151. Against the Commission's 'lets' test, scale entry is not likely while access to radio spectrum is a significant barrier to entry into the national market for trunked mobile radio services. Even if this situation was to change in the foreseeable future, it is unlikely that entry would be timely. At the conference, TeamTalk accepted that there was unlikely to be a new entrant in the short term, even in the event of new spectrum becoming available.
152. Furthermore, even if access to spectrum could be secured, there is significant doubt as to whether scale entry would be commercially viable. To provide choice to all mobile radio customers, the extent of entry would need to be national, and it is doubtful that such an enterprise would be sustainable.
153. The Commission therefore concludes that entry on a scale and within a timeframe that would be sufficient to remove dominance concerns is unlikely.

Conclusion on Dominance in the National Market for TMR Network Services

154. The proposed acquisition by TeamTalk of Telecom's national trunked mobile radio services would lead to a level of aggregation well in excess of the Commission's safe harbour guidelines.
155. Products such as cellular, and potentially satellite, will provide some constraint on the combined entity, and the degree of constraint may increase over time. However, the exact nature of this evolution over time depends

¹⁸ A natural monopoly is a market where, due to scale or scope economies in production and limited size of the market, the service is most economically provided by a single provider.

heavily on the business strategies pursued by both cellular and satellite operators. The Commission is not in a position to speculate on such issues.

156. The Commission understands that there are customers for whom mobile radio will be the preferred solution, both on functionality and economic grounds, at least for the next two to three years.
157. The Commission therefore concludes that it is not satisfied that the proposed acquisition would not result, or would not be likely to result, in any person acquiring or strengthening a dominant position in the national market for trunked mobile radio services.

PUBLIC BENEFITS AND DETRIMENTS

Introduction

158. Given the conclusion that the Commission is not satisfied that the acquisition would not result, or would not be likely to result, in the combined entity acquiring a dominant position in the national market for trunked mobile radio services, the acquisition cannot be cleared under s 67(3)(a) of the Act. The Commission must therefore consider whether the proposed acquisition can be authorised under s 67(3)(b) of the Act.
159. The authorisation procedure requires the Commission to identify and weigh the detriments likely to flow from the acquiring of a dominant position in the relevant market, and to balance those against the identified and weighed public benefits likely to flow from the acquisition as a whole. It is important to note that the detriments may only be found in the market or markets where dominance is acquired or strengthened, whereas benefits may arise both in those and in any other markets. Only where the benefits clearly outweigh the detriments can the Commission be satisfied that the acquisition will result, or be likely to result, in such a benefit to the public that it should be permitted, and thus be able to grant an authorisation for the acquisition.
160. The principles used by the Commission in evaluating detriments and benefits are set out in: *Guidelines to the Analysis of Public Benefits and Detriments* (the Guidelines), a revised version of which was issued by the Commission in December 1997. The various issues raised have been discussed in a number of decisions by the Commission and the courts in recent years. In assessing both benefits and detriments, however, the focus has increasingly been on economic efficiency. The Court of Appeal stated in *Tru Tone Ltd v Festival Records* that the Act:

“..is based on the premise that society’s resources are best allocated in a competitive market where rivalry between firms ensures maximum efficiency in the use of resources.”
161. The Commission considers that a public benefit is any gain, and a detriment is any loss, to the public of New Zealand, with an emphasis on gains and losses being measured in terms of economic efficiency. In contrast, changes in the

distribution of income, where one group gains while another simultaneously loses, are generally not included because a change in efficiency is not involved. The Commission is also mindful of the observations of Richardson J in *Telecom*¹⁹ on the Commission's responsibility to attempt to quantify benefits and detriments where and to the extent that it is feasible, rather than to rely on purely intuitive judgement. This is not to say that only those gains and losses which can be measured in dollar terms are to be included in the assessment; those of an intangible nature, which are not readily measured in monetary terms, may also be relevant. A summary of the benefits and detriments that have been quantified is provided at Appendix 1.

The Counterfactual

162. The benefits and detriments likely to flow from the proposed acquisition in the future have to be assessed against a counterfactual of what might otherwise happen in the future in the absence of the acquisition. Thus, a comparison has to be made between two hypothetical future situations, one with the acquisition and one without. The differences between these two scenarios can then be attributed to the impact of the acquisition in question. In framing a suitable counterfactual, the Commission bases its view on a pragmatic and commercial assessment about what is likely to occur in the absence of the acquisition.²⁰
163. The applicant has proposed a 'status quo' counterfactual. This is described as a situation where neither TeamTalk nor Telecom undertake significant capital investment in either network. Network coverage remains relatively static at current levels and few new services are introduced. TeamTalk claims that this is due to lack of interest in the market by Telecom because Telecom continues to focus on cellular and broadband and because of TeamTalk's []].
164. The Commission has considered whether there might be other plausible counterfactual scenarios. Other possibilities include:
- A new entrant arrives, possibly with a new generation mobile radio technology,
 - Telecom upgrades to a new technology network.
165. As noted in the dominance analysis, scale entry has occurred in the past, both from TeamTalk itself, and from MCS. This appears to have occurred against an expectation of a forced migration of PMR users to TMR that did not eventuate. There is no indication that such a forced migration, which would significantly expand the market, is likely to occur. Even if such a migration were to occur, it is not clear that new entry would be attractive or possible given the existence of TeamTalk and MCS, and spectrum availability issues.

¹⁹ *Telecom Corporation of New Zealand Ltd v Commerce Commission* [] 3 NZLR 429,447.

²⁰ See the discussion in: Commerce Commission, *Decision No. 277: New Zealand Electricity Market*, 30 January 1996, especially page 16.

166. Telecom has indicated that it considered Fleetlink to be [

]

167. The Commission concludes that a continuation of the status quo seems to be a likely outcome, and therefore a reasonable counterfactual.

DETRIMENTS

168. In general the economic detriment that might be expected to flow from the acquisition of a dominant position in a market may stem from four sources, all of which can be expected to result from the loss of competitive pressure in the market:

- the potential ability to raise prices above the competitive level;
- the potential to produce less efficiently;
- the potential to reduce product quality; and
- the potential to innovate less over time.

169. The ability to raise price results in economic losses referred to as a loss of ‘allocative efficiency’, being the less than optimal allocation of resources that results from higher than competitive prices. Production being undertaken in a less efficient manner is referred to as the loss of ‘productive efficiency’, while the reduction in innovation is referred to as the loss of ‘dynamic efficiency’.

170. The Commission attempts, to the extent possible, to quantify these detriments. However, it is not usually possible to accurately estimate the likely future outcome of any particular merger. Therefore the Commission attempts to estimate a range of values that might seem reasonable given the circumstances of the proposal being considered. Issues that could impact on the scale of detriments found in any particular case include:

- the likely size and governance structure of the organisation,
- the nature of the specific industry, and the potential for cost inefficiency to arise in that business,
- the size and potential impact of any competitive fringe that remains in the market,
- the potential for, and predictability of, competitive entry - if any.

Allocative Efficiency

Estimating Loss of Allocative Efficiency

171. A loss of allocative efficiency is likely to arise from the acquisition or strengthening of dominance. A profit maximising dominant firm will be likely to raise prices above, and reduce output below, competitive levels. This use of market power will result in a harmful distortion in the allocation of resources in the economy, causing a loss of allocative efficiency. Required to pay higher prices for the good or service, buyers will reduce their purchases, or even go without, and substitute goods or services which meet their requirements in a less satisfactory way. In consequence, resources are re-allocated to producing less socially valuable outputs.
172. The net loss to society from the elevation of price above the competitive level in the market in question is generally referred to as the 'dead-weight welfare loss'. In principle it is measured as the difference between the maximum prices which unsatisfied buyers would be willing to pay for the units of the good or service no longer produced, less the value in other uses of the inputs no longer needed.
173. The post-acquisition rise in prices results not only in a loss of allocative efficiency, but also leads to a redistribution of income from those buyers who pay the higher prices to the producer and its shareholders who gain the higher revenue. Since the dollar magnitudes of these losses and gains cancel out, the Commission has accepted in previous decisions that social welfare as a whole is generally unaffected, and therefore that those distributional changes can generally be ignored.
174. The size of the dead-weight loss is influenced potentially by several factors:
- the magnitude of the price increase caused by the acquisition;
 - the price elasticity of the demand curve in the region of the pre- and post-acquisition prices;
 - the extent of any economies of scale lost from the acquisition-induced reduction in output; and
 - the extent to which the pre-acquisition price already may be elevated above the competitive price.

The Post-acquisition Price Increase

175. The Commission has given careful consideration to any price increase which may be possible as a result of the acquisition. The views of industry participants were sought and parties attending the conference were questioned closely.
176. As discussed above, the Commission has concluded that the proposed acquisition would result in an acquisition of dominance in the market. It is

axiomatic that the merged entity will have the ability to charge prices higher than would have been possible without the acquisition. However TeamTalk has argued that it will be constrained in the size of any price increase by, inter alia:

- the existence of near substitutes (in particular cellular) for most customers;
- the inability to identify with any precision those other customers who do not have near substitutes; and
- the inability to increase prices during the period of existing fixed term contracts.

177. Other industry participants spoken to by the Commission generally agreed that as a result of the acquisition prices could be higher than they otherwise would have been. These participants have suggested that competition between Telecom and TeamTalk over the few years had led to significant price reductions. For example, data supplied by Telecom suggests that average revenue per mobile for national coverage fell from about \$[] per month in 1994 to \$[] per month in 1999. However TeamTalk has argued that, given that from 1994 to 1998 TeamTalk did not provide anything remotely resembling national coverage, it is reasonable to assume that the bulk of the reduction in that period was as a result of cellular prices dropping.
178. MCS said that in its view the intense downward pressure on TMR prices was largely attributable to the direct competition between TeamTalk and Telecom, and if this ceased the downward movement on prices may cease and there may even be some price increases. Telecom said that if competition between Telecom and TeamTalk ceased there might not necessarily be price increases, but they might not be decreased to the same extent.
179. The Commission accepts that cellular will place an important constraint on TMR pricing in the future. It also recognises that technological developments including the future roll out of digital technology could place the existing TeamTalk and Fleetlink businesses at risk, and this risk would be increased if TMR prices are increased significantly from their present levels. These factors will limit the extent to which TeamTalk could increase prices post-acquisition. On the other hand, the Commission considers that the loss of direct competition between TeamTalk and Fleetlink will not be as neutral as suggested by TeamTalk. The submissions made by MCS, Telecom and others are broadly consistent in this respect. As stated by MCS, TeamTalk and Telecom currently spend a considerable amount of effort attempting to take customers off each other, and normally this battle is fought on price.
180. The Commission has considered the extent to which current customers of TeamTalk and Telecom would be protected from price increases by the existence of contracts. It is understood that typically customers of both firms sign three year contracts, and that prices cannot be increased during the term of the contract. TeamTalk has stated that []% of its customers have contracts which expire in 2 years or more, and another []% which will expire in

between one and two years. Telecom has noted, however, that [].

181. The Commission has placed only limited weight on the constraint from existing contracts. In part this is because the market has been characterised by a general downward movement in prices in recent years, and it may be that a fixed price for the term of the contract provides greater protection to the suppliers of the service than it does to their customers.
182. The Commission has placed greater weight on the claim by TeamTalk that it would be difficult to identify with any precision those customers who are least able to find satisfactory substitute to their TMR services, and therefore it would be unable to increase their prices substantially without the risk of losing other customers. Nevertheless, the Commission does not rule out the possibility that some price discrimination could take place.
183. Having regard to all these factors, the Commission proposes to adopt a 5%-10% range of price increases which may arise from the proposed acquisition.

Price elasticity

184. The Commission has considered a range of demand price elasticities when considering the possible loss of allocative efficiency. For supply elasticity, it is possible that long run marginal costs in a network business could fall. Under certain circumstances this could imply allocative efficiency gains from price rises. However, as a conservative approach, the Commission has assumed constant costs within the relevant range.
185. In its draft determination, the Commission calculated allocative efficiency losses across the market assuming market elasticities of between -0.1 through to -1.0 . No submissions were received on these figures.
186. The Commission considers that this range is conservative from its perspective (that is, it would be more likely to overstate than understate the size of the loss of allocative efficiency) and that it is appropriate to apply this range to its analysis.

Estimated Allocative Efficiency Loss

187. The Commission considers that an estimate of a 10% price rise across the market, with an elasticity of -1.0 provides a reasonable upper bound on the loss of allocative efficiency. This would imply a maximum detriment of \$65,000 per annum. The lower bound, using a 5% price increase and an elasticity of -0.1 would imply a minimum detriment of \$1,500 per annum.

Loss of Productive Efficiency

188. A monopoly producer is normally considered to lack the competitive pressures to minimise costs. Organisational inefficiency may creep into its operations, and costs increase, because a satisfactory level of profit is assured even when the firm is less than fully efficient.

189. The potential impact on costs of production arising from market power, and hence the size of the potential detriment, can be assessed by assuming that costs might rise by a given percentage as inefficiency takes hold. For the purposes of illustration, a one per cent decrease in productive efficiency would amount to about \$[] per annum for the proposed combined entity, and costs would increase by the same magnitude for each further percentage point decrease, or proportion thereof.
190. It is a matter of judgment as to the potential size of such productive inefficiency. Clearly, it is most likely to arise over time as the experience of operating in a market where there is an absence of effective competition causes the firm's internal checks and constraints to become less effective. The magnitude it might reach in time would seem likely to be influenced by various factors, including the following:
- Some customer segments will be under threat from competitors. Mobile radio competition will still come from local TMR operators, PMR and in the North Island MCS will offer choice to some customers. Other products will also provide some constraint. This will primarily come from cellular, but satellite may also provide some constraint for remote area coverage, albeit at a high price. The situation the combined entity would face could be argued to be not dissimilar to many differentiated product businesses, where some customers are relatively captive, and others are contested.
 - The combined entity would still be a relatively small business, with a small customer base supporting a national network. The company is 50% owned by its managers and productive efficiency will be a key determinant of its profitability. Given the focussed nature of the proposed company with a single, potentially short-lived product and approximately [] staff (plus sales channels), there seems to be minimal likelihood of significant cost increases comparable to those that might be encountered in larger corporations.
191. Nonetheless there are likely to be additional costs. There may be some scope economies lost in the process of separating Fleetlink from Telecom. Telecom is an integrated service provider in a business generally considered to be subject to significant scale and scope economies²¹. For this reason it might be expected that duplication of systems or sales effort would result in some cost increases.
192. Telecom has stated that significant cost would be involved in separating the business initially, although they have not quantified those costs.
193. In its submission on the draft determination, TeamTalk suggested that the intense competition it will face post-merger, together with its need to maximise revenue, will mean that it will be under constant pressure to reduce

²¹ Scale economies occur when production costs per unit fall as the number of units produced increases. Scope economies occur when it is cheaper to produce multiple products together.

costs and drive out any productive inefficiencies. Further it believes that extremely vigorous external corporate governance, provided by two very experienced Active Equities directors, and the fact that owner-managers operate the company on a day-to-day basis ensures that any productive inefficiencies will be kept to an absolute minimum.

194. The Commission recognises that TeamTalk will remain a relatively small company post-merger, that it has not been particularly profitable to date and that the threat of the development of new products which will supersede TMR constantly hangs over it. Its owners are not assured of a satisfactory future return, irrespective of the limited competition it may face initially. Further, given the single product focus, major inefficiencies will be likely to be transparent. The major shareholders who are involved in the day to day management of the company will have a strong incentive to address these inefficiencies.
195. Having regard to these matters, the Commission has assessed the loss of productive efficiency arising from the acquisition as being likely to be in the range of 1%-3% of the combined cost base (approximately \$[], or around \$[] per annum.

Loss of Product Quality

196. A monopoly producer lacking the full force of competitive pressures may be able to increase profits by choosing to provide its products or services at a lower quality level than might be necessary in a competitive market. As with productive inefficiency, this may arise over time. The potential for reducing product quality will also depend upon the nature of the product or service in question, and the particular market circumstances of the company.
197. In this case, the fact that some customer segments will be under threat from competitors is likely to provide some constraint on reduction in product quality. The relatively small size of the business, which may remove the tendency for productive inefficiency to become a major issue, is unlikely to reduce the incentive to reduce quality. As competition is not expected to be sufficient to prevent the company from being in a position of dominance in the national TMR services market, the Commission has therefore given consideration for the potential for service quality levels to fall.
198. Quality in this case might be likely to fall into two categories, sales and service quality, and network quality.
199. The Commission considers that sales quality is less of an issue than service quality. Many sales will be through dealers, as is currently the case, and the reduction of choice between the Telecom and TeamTalk networks is likely to have little impact on the operation of those dealers, most of which sell a variety of communications services. For direct sales agents it is possible that there would be less pressure to provide excellent customer service than when a direct competitor existed. However, it also possible that direct sales agents have a strong incentive to make additional sales, either by expanding the usage of the service by existing customers or acquiring new customers from other

products, and that this incentive is not substantially reduced by the proposed merger.

200. For pure service functions, such as rapid access to assistance from the combined entity by telephone 24 hours a day, service quality could conceivably be reduced. However, given the nature of some customers' businesses, for example security firms that have the potential to involve life-threatening issues, it is likely that the combined firm would have little ability to reduce such service quality.
201. The prime aspects of network quality in mobile radio could be summarised as coverage, the potential to communicate on the network from a wide geographic area of relevance to the customer, and availability - the ability to complete the call when required. Coverage could be reduced, compared to the counterfactual, by either removing marginal radio sites, or adding fewer new sites than might otherwise have been the case. Availability will be an issue of investing in sufficient capacity to carry the level of traffic demanded, and ensuring the network is maintained to a level sufficient to ensure a high level of technical availability.
202. TeamTalk has argued that reducing coverage would not make economic sense. The loss of revenue that would occur from a reduction in coverage would not be offset by the minor cost savings.
203. The Commission considers there may be little ability for the proposed combined entity to reduce the level of technical availability because of the potential for life threatening issues to be involved. Whether or not this is the case however, it could be argued that there could be some potential for the combined entity to reduce coverage, or to operate the network at a higher level of utilisation, to the point that traffic congestion could become a more significant issue than under the counterfactual scenario. However if congestion becomes excessive, eventually revenue will be lost as discretionary calls are not made. The Commission considers that this will provide a counter incentive and will ensure a reasonable level of service availability for customers. It accepts TeamTalk's argument that a reduction in service will result in a loss of at least some customers. Given the fixed nature of most costs, the resulting loss of revenue will not necessarily be offset by cost savings.
204. No party has suggested that the proposed acquisition will result in a major reduction in general service quality, rather an improvement in service has been suggested as being possible. While the Commission considers that there may be some potential for service quality to decline, this is unlikely to be of significance. The Commission has not included any amount for the possible loss of service quality in its quantification of detriments.

Loss of Dynamic Efficiency

205. Dynamic efficiency is concerned with the speed with which an industry adopts superior new technology and produces improved new products, the first

allowing costs of supply to be reduced, and the second bringing the benefit of meeting customer needs more fully. Competition is generally considered to act as a stimulus to dynamic efficiency, and market power as a retardant. It is generally believed that in an industry which has at least a significant scope for technological advance, the potential losses associated with market power are likely to be greater in the longer term in respect of dynamic inefficiency than they are in respect of the static forms of inefficiency (namely, allocative and productive) considered above.

206. Mobile communications technologies and markets overall can be described as being highly dynamic, both currently and for the foreseeable future. In particular cellular markets are developing very rapidly. However, a number of industry commentators have argued that mobile radio markets are changing at a markedly slower pace than cellular markets. Likewise, while the applicant argues that new technology mobile radio networks could be built, other industry participants have questioned whether the introduction of these digital technologies would be economic in the New Zealand environment. However, there was general agreement that mobile radio would continue either with the current or new technologies, and that it was unlikely to be totally replaced by cellular.
207. The applicant claims the combined entity will have more incentive than Telecom to develop the mobile radio network to compete against cellular. []
208. If this view is accepted, it can be argued that the proposal will increase innovation, and hence increase dynamic efficiency. However, the counter view is that with a less competitive environment, the company could choose to raise prices to captive customers, if they could be identified, and minimise investment, possibly resulting in losses of dynamic efficiency.
209. The Commission sought comment on these matters in its draft determination, but received little specifically on this matter which was helpful. The Commission considers that TeamTalk, whose future survival may depend on its ability to at least match developments of similar communication services, may have a stronger incentive than Telecom to be innovative. The acquisition may give it the resources to develop new products and services.
210. For the purposes of the determination however, the Commission has chosen a conservative approach and assumed negative dynamic efficiency. The Commission has assessed dynamic efficiency losses of 0-3% of claimed combined revenue base (approx \$[] million) or \$0 - \$[] per annum.

BENEFITS

211. TeamTalk have claimed that the proposed acquisition will have the effect of reducing costs through productive efficiency gains from the removal of duplication of effort that currently occurs with two national networks. In

addition TeamTalk has claimed that the acquisition would allow it to develop the national mobile radio network and to grow the market.

Methodology

212. To quantify its claimed public benefits, TeamTalk has developed two scenarios; a ‘without’ scenario which assumes the acquisition does not proceed, and a ‘with’ scenario which assumes the acquisition proceeds. For each of these scenarios TeamTalk has developed detailed profit and loss models for five years and compared the outcome of each. It has discounted the claimed future benefits using a discount rate of 10% to give the NPV of the two scenarios.
213. The principal assumptions built into the “without” scenario by TeamTalk include:
- the ownership of TeamTalk and Fleetlink remain unchanged;
 - [
-]
214. The principal assumptions built into the “with” scenario by TeamTalk include:
- []. Value added services, like [] are sold as extras and generate additional revenue;
 - equipment recovered when rationalising the two networks is re-installed to increase capacity and coverage. The cost of installation and the associated with developing new products will involve new capital investments;
 - the market grows by 10% per annum for the first two years then approximately by 3% per annum for years three to five.
215. When considering these assumptions, the Commission obtained from Telecom its high level forecasts for its mobile radio business for the next [] years. The data supplied []]. Telecom has not supplied detailed cost data for its mobile radio business, arguing that this cannot easily be extracted from the combined Telecom business. The Commission has therefore relied to a large extent on TeamTalk’s model.
216. Comment on the claimed benefits were sought from interested parties. Because many of the calculations were confidential, parties could comment in general terms only. However Telecom accepted that the networks could be rationalised in the way suggested by TeamTalk. MCS said that it believed that coverage, capacity, linking and labour rationalisation from the acquisition will result in significant cost savings, and that infrastructure coming free as a result of the rationalisation could be employed to either increase capacity or increase coverage.

217. At the conference, Telecom and MCS agreed with TeamTalk that the operation by one entity of MPT1327 networks using equipment from different suppliers was possible in an engineering and operational sense. TeamTalk stated that the network rationalisation flowed largely from redeployment of equipment in rural and remote areas, where channel capacity was not a significant issue. In any case, TeamTalk emphasised that its application did not rely to any significant extent on benefits flowing from network rationalisation.
218. The Commission recognises that many of the cost savings claimed are unlikely to disappear at the end of the five year period, as may be implied by the five year time horizon of TeamTalk's financial model. Some may continue in perpetuity, albeit at increasingly discounted values when the time value of money is taken into account. The same applies to the detriments, however, and a five year time horizon is probably sufficient given future uncertainties.
219. For the purposes of analysing the claimed benefits, the Commission accepted some figures as presented when this was considered appropriate, and made adjustments to those items or categories when this was considered appropriate. These adjustments are discussed below.

Cost Savings

220. Cost savings built into the with scenario largely arise from the reduction in staff and associated costs. The Commission has not been able to fully test the financial model presented to it with other industry participants, due to the commercially sensitive nature of the information. The Commission has therefore taken the approach of vetting the proposed savings for underlying logic. For example, staff checked that the proposed headcount is less than the sum of the two independent operations, but reasonably increased compared with either Telecom or TeamTalk. Likewise, proposed cost savings on a per handset and headcount basis have been checked to ensure percentage falls are reasonable when compared to the increased size of the business.
221. In general the Commission is of the view that the claimed cost savings appear reasonable. In some cases the approach used by TeamTalk is clearly conservative. For example administrative expenses have been extrapolated from TeamTalk's current costs, allowing for virtually no cost reductions. Likewise, most of the model is derived from TeamTalk's own cost base. In terms of accommodation costs and salaries it would seem likely this would generate conservative cost savings when compared with those of Telecom.

Pattern of Cost Savings and One-off Costs

222. In general, when large scale mergers and acquisitions take place it may take considerable time for claimed costs savings to be realised. This is particularly the case when business units need to be restructured, production reorganised, and []. For a large organisation it might take from six months to a year or more to realise expected savings, if they are made at all. There may also be significant costs directly associated with the process of designing and organising the new business. Finally there is the possibility

of expected savings never being realised at all, either due to unexpected difficulties in streamlining the business, or the growth of new areas of cost within the expanded organisation.

223. The applicant has stated that, given the small size and single product nature of the business, they do not anticipate delay in obtaining cost savings should the proposed merger proceed. It is anticipated that the expanded business would operate from TeamTalk's premises, in similar form to the current business, except with an expanded customer base and additional staff to run the expanded business. As the bulk of the initial claimed benefits are operating cost savings, TeamTalk anticipates little delay in achieving the expected efficiencies.

Interest and Depreciation

224. Interest and depreciation charges that are additional to those that would be incurred under the counterfactual are costs that should be accounted for. In the case of depreciation, it is the economic cost that is relevant, rather than the accounting rate of depreciation, which may or may not be a close proxy for the rate of economic depreciation of the asset in question. In its application, TeamTalk has stated net benefits in terms of changes in EBITDA, earnings before interest, tax, depreciation and amortisation.
225. TeamTalk's model has assumed no significant changes in capital assets, with assets released by the amalgamation being utilised to support the expected growth of the business. Interest and depreciation charges are therefore constant. As a result the omission from the net benefits analysis is not significant.
226. TeamTalk has also submitted some details of proposed new services that they anticipate the merged company would be in a position to offer. These may increase the public benefits attributable to the proposed acquisition. In its application TeamTalk chose not to claim any additional public benefit from these proposed new services. Subsequently, in response to a question in the draft determination, TeamTalk suggested that 50% of the projected EBITDA from these new services be included. As discussed below, the Commission considers that the costs and benefits associated with these proposed new services should be disregarded in the public benefit analysis. Accordingly no adjustment is needed to costs to allow for interest and depreciation on these services.

Comment on Claimed Cost Saving

227. The Commission has taken the issues discussed above into account when considering the extent to which it should accept the cost savings proposed by TeamTalk. Given the small size of the business and the conservative approach taken in the model, the Commission considers that it is reasonable to expect that most of the claimed savings should eventuate within a relatively short period of time.
228. The Commission notes that some additional costs are likely to be incurred during the initial restructuring. It is also possible that additional costs will

emerge that TeamTalk has not foreseen, as the business will be considerably larger than the current TeamTalk operation.

229. TeamTalk has argued that the potential for cost savings, both one-off and ongoing, that have not yet been identified exists, off-setting the potential for unidentified costs. While this may well be so, the Commission is not inclined to give significant weight to savings that have not been identified.
230. For this reason the Commission has reduced TeamTalk's claimed savings by between 10 and 20 percent. From a base of claimed cost savings of approximately \$[] million per annum, this amounts to \$[] per annum.

Revenue Changes

231. TeamTalk has claimed that subscriber growth will rise as a result of the acquisition. It assumed that this growth will be supported by redeployment and more efficient use of existing network assets. Where this subscriber growth consists of completely new users of the service, due to better pricing in the market, better network coverage or additional services, it is reasonable to assume that they will lead to cost savings. However, for customers that change to TeamTalk's TMR service from a competing product, the company losing the customer will have lost some contribution to its costs. For customers that fall into this category, some of the additional contribution gained will not be a net benefit to the public of New Zealand.
232. New revenue growth is also a matter of speculation in itself, and will depend on events such as underlying growth of the economy and the response, if any, of competing companies and products. Whether subscriber growth will eventuate can never be known with certainty.
233. Given the above considerations, the Commission has discounted the new revenue (contribution) figures by between 20 and 50 percent. In other words, it is assumed that between 50 to 80 percent of the claimed new contribution will be realised, and will be a net public benefit. It is likely that these are conservative figures.
234. The Commission has given consideration to discounting the new contribution claim even further, perhaps by 100 percent. After all, it could be that none of the projected growth would in fact occur. One party suggested that operation of the current networks in parallel will not be feasible, in which case allowance for additional capital investment would be needed to fund the expected growth. However, this was not borne out by the submissions at the conference and it would seem an extreme approach. Rather the Commission considers that it is reasonable to assume that the combined entity would have more incentive to compete into new market segments than Telecom with its range of products, and that the combined entity would have more resource to do so. Thus, compared to the counterfactual, some growth could be expected. If new capital were needed, it will reduce the claim but would still leave some net gain.

235. In its application, TeamTalk said that with the increased customer base and resources following the acquisition, it would be able to increase the scope of its TMR business. It said that it is committed to delivering [], and to increase coverage. It estimated that these services will provide an additional NPV benefit of \$[] million over 5 years, but as it considered that it was difficult to be precise about this calculation, it did not make any provision for it in its application. Subsequently, in response to a question in the draft determination, TeamTalk proposed that 50% of this benefit be included.
236. The Commission has not accepted this proposal. It does not consider that it has been demonstrated adequately that these services will be provided at the level, or with the return, suggested by TeamTalk. However the Commission recognises that by attributing no benefit in respect of these proposed new services, it is being conservative in its approach. Had the relative size of public benefits and detriments been closer, it may have given further consideration to this matter.
237. Reducing the claimed new revenue by between 20 and 50 percent for the reasons discussed above has reduced the applicants claimed benefit by between \$[] in year one, rising to \$[] in year five, increasing with the proposed growth of new business.

Intangible Benefits

238. TeamTalk argues that the single most significant intangible benefit of the proposal is that New Zealand business will have an alternative to cellular. By definition, if TeamTalk were to grow the mobile radio market by gaining some customers that might otherwise have been with cellular, then there has been some benefit to those customers—otherwise they would presumably have chosen cellular. However, the Commission notes that the additional profit from new customers is already included in the amount attributed to additional profit from all new revenue.
239. Furthermore, even if TeamTalk's expectations of growth following the merger are realised, the incremental customer gain to TeamTalk is small in comparison with the overall size of the cellular market. The Commission is therefore not inclined to give any additional weight to the claimed benefits of the merger as the result of the proposal providing an alternative to cellular for New Zealand businesses, as claimed by the applicant.

BALANCING OF BENEFITS AND DETRIMENTS

240. The determination of the application involves a balancing of the public benefits and detriments which will, or be likely to, result from the acquisition. Only where the public benefits outweigh the detriments can the Commission be satisfied that the acquisition will result, or be likely to result, in such a benefit to the public that it should be permitted, and be able to grant an authorisation for the acquisition.
241. The table provided at appendix one summarises the benefits and detriments assessed by the Commission. As shown in this table, the Commission concludes that the public benefits arising from the acquisition are likely to

outweigh the detriments from the acquisition by between \$6.072 million and \$11.301 million over five years.

242. Accordingly, the Commission is satisfied that the acquisition by TeamTalk of the trunked mobile radio business of Telecom will result, or will be likely to result, in such a benefit to the public that it should be permitted.

DETERMINATION

243. Pursuant to section 67(3)(b) of the Commerce Act 1986, the Commission determines to grant an authorisation to TeamTalk Limited for the acquisition of certain mobile communication assets comprising the trunked mobile radio business branded "Fleetlink" and operated by Telecom New Zealand Limited.

Dated this day of May 2000

M J Belgrave
Chair

APPENDIX ONE**SUMMARY OF BENEFITS AND DETRIMENTS**

	Year 1	Year 2	Year 3	Year 4	Year 5
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DETRIMENTSLoss of Allocative Efficiency

Worst Case	\$65,000	\$65,000	\$65,000	\$65,000	\$65,000
Best Case	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500

Loss of Productive Efficiency – increase in costs of 1-3% of projected costs

Worst Case	\$[]	\$[]	\$[]	\$[]	\$[]
Best Case	\$[]	\$[]	\$[]	\$[]	\$[]

Loss of Dynamic Efficiency – equivalent to 0-3% of projected revenue

Worst Case	\$[]	\$[]	\$[]	\$[]	\$[]
Best Case	\$0	\$0	\$0	\$0	\$0

Total Detriments

Worst Case	\$754,400	\$807,800	\$850,700	\$869,600	\$891,500
Best Case	\$103,600	\$108,000	\$109,800	\$110,500	\$112,300

Worst Case NPV of detriments over 5 years: \$3,139,000

Best Case NPV of detriments over 5 years: \$411,000

BENEFITSCosts – 80 to 90 percent of claimed cost savings acceptedContribution gains – 50 to 80 percent of new contribution accepted

Worst Case	\$1,835,000	\$2,095,000	\$2,535,000	\$2,870,000	\$3,135,000
Best Case	\$2,138,000	\$2,554,000	\$3,258,000	\$3,794,000	\$4,218,000

Worst Case NPV of benefits over 5 years: \$9,211,000

Best Case NPV of benefits over 5 years: \$11,712,000

NET PUBLIC BENEFIT (BENEFITS LESS DETRIMENTS)

Worst Case	\$1,080,600	\$1,287,200	\$1,684,300	\$2,000,400	\$2,243,500
Best Case	\$2,034,400	\$2,446,000	\$3,148,200	\$3,683,500	\$4,105,700

NPV OF NET PUBLIC BENEFIT OVER 5 YEARS

Worst Case: \$6,072,000

Best Case: \$11,301,000

Note: NPV calculations assume a 10% discount rate.

ABBREVIATIONS

AMPS	Advanced mobile phone system – a technical standard for cellular mobile telephone systems.
CDMA	Code division multiple access – a digital voice transmission which is ‘spread’ over a much wider bandwidth by coding each bit with a sequence of many more bits in a pseudo random pattern. Adopted by at least two major cellular operators in the USA. Adopted as interim standard IS-95 by TIA in mid-1993. Likely to be used by any new operators in the 800 MHz band.
CSP	Carriage service provider.
CTIN	Centre for Telecommunications Information Networking.
D-AMPS	Digital AMPS (known as TDMA in the USA) – Uses time division multiple access technology which allows several conversations to share a single radio channel by each transmitting digitised voice within its allocated timeslot.
DCS 1800	Digital cellular system at 1800 MHz (GSM extension), also known as half rate GSM for local loops.
DECT	Digital European cordless telephony standard based on the Ericsson DCT900 aimed at providing a cordless telephone service. Uses TDMA and can hand over calls between cells. Is similar to digital cellular but optimised for an office environment compared to cellular’s optimisation for mobile and wide coverage.
GEO	Geo-stationary orbit (in reference to a satellite).
GSM	Global system for mobile communications (or group special mobile) – a technical standard for digital cellular mobile telephone systems. GSM uses a smart card, or subscriber module (SIM) for subscriber identity and billing purposes. Utilises TDMA system.
LEO	Low earth orbit (in reference to a satellite).
LMDS	Local multipoint distribution services.
NPV	Net present value.
FACTS	Public access cordless telecommunications services
PCS	Personal communication services. Radio communications that encompass mobile and ancillary fixed communications that provide services to individuals and businesses and can be integrated with a variety of competing networks.

PHS	Personal handy phone system.
PMR	Private mobile radio services.
PSTN	Public switched telephone network – the switched telephone network to which public customers are connected.
TDMA	Time division multiple access – allows several conversations to share a single radio channel by each transmitting digitised voice within its allocated timeslot. Used by GSM and DAMPS, JDC, DECT and DCS 1800 based PCN. Generally referred to as D-AMPS in New Zealand.
TMR	Trunked mobile radio

GLOSSARY

Analogue	The term used to describe the continuously variable wave-form nature of voices and other signals.
Bandwidth	The range of frequencies which an analogue transmission medium is capable of carrying, expressed in Hertz (cycles per second).
Base station	Radio transmitter and receiver used for transmitting and receiving calls to or from mobile telephones or radios in a particular coverage area.
Cellular mobile	Mobile telephone system in which the coverage area is divided up into a large number of small areas, each of which had its own base station.
Digital	The representation of a signal in the form of a stream of binary numbers rather than as an analogue electrical signal.
Hertz	Measurement in cycles per second, of the pitch or frequency of wave-form.
Mobile telephones	Telephones which are not fixed and which communicate with the network by transmitting radio signals.
Radio transmissions	Transmission of information in the form of radio waves, without the need for a physical cable.