



HOUSE OF ASSEMBLY

PUBLIC WORKS COMMITTEE

GOVERNMENT RADIO NETWORK

Old Parliament House, Adelaide

Wednesday 3 March 1999 at 10.25 a.m.

(OFFICIAL HANSARD REPORT)

PARLIAMENT OF SOUTH AUSTRALIA

MEMBERS:

Mr I.P. Lewis (Presiding Member)
Ms L. Stevens MP
Mr G. Scalzi MP
Ms M.G. Thompson MP
Mr M.R. Williams MP

WITNESS:

DAVID KEDDIE, Telecommunications Engineer, Country Fire Service, PO Box 758 Marleston 5033, called and examined:

383 THE PRESIDING MEMBER: To those of you who were not here last week, thank you for appearing before the Public Works Committee today. Before proceedings begin, I would like to bring the following matters to your attention. Sections 28 and 31 of the Parliamentary Committees Act outline the privileges, immunities and powers of the committee. Witnesses should note that this is a hearing which is a lawful function of Parliament and as such it warrants the same respect as Parliament itself. The proceedings are open to the public, except when the committee is deliberating on the evidence it has received, or if witnesses request that part of their evidence be submitted in private for reasons of justifiable confidentiality.

Unless witnesses request that evidence be received *in camera*, evidence given in this hearing is available to the public. All the evidence presented in this hearing will be recorded by *Hansard* reporting staff, and a copy of the transcript will be forwarded to the witness for them to check for accuracy. Whenever you come before the committee to give evidence, I would like you to first give your name, including your title, for the record, and then the committee wants you to summarise anything you have to say or make some explanatory remarks of any paper you may give us. Questions will be asked by members of the committee, then, in order to clarify aspects of the submission or to seek relevant additional information and perhaps to enable points to be amplified, the committee will provide an opportunity to make statements off the record. Do you have any questions that you would like to ask me about the remarks I have just made?

MR KEDDIE: No.

384 THE PRESIDING MEMBER: Please proceed.

MR KEDDIE: I am a telecommunications engineer by profession. I am currently under contract to the South Australian Country Fire Service and am involved on its behalf in the planning for and implementation of the GRNC. I have been involved in this work

for the past three years. The CFS Manager, Technical Services, as a result of last week's sitting, identified a number of issues that you requested be addressed from a technical aspect. These are as follows. With regard to the choice of Motorola Smartzone, I am aware of other technologies or standards for radio communications systems that may have capabilities similar to those of Astro Smartzone, namely TETRA, MPT and APCO 25. As the technology selection for the GRNC did not involve the CFS and there has been no subsequent requirement to provide the CFS with any assessment of alternative technologies, I am unable to comment on any of the processes that led to the choice of Motorola Smartzone or provide any comparative assessment of it in relation to any other products.

I am aware that the CFS was advised in about mid 1996 that Motorola was appointed as the designated equipment supplier for the Government radio network contract and that the request for proposal, issued in March 1997 by DAIS, was for the purpose of selecting a service provider rather than the technology.

With regard to the ability of Astro Smartzone technology to operate through an ionised atmosphere, this question is answered in two parts. The first part of the answer relates to the frequency band for the GRNC, namely the UHF band. Radio equipment being used in the immediate vicinity of an intense fire may experience momentary fading or loss of communications. Anecdotal evidence from personnel in the field has identified instances of short term blocking of communications within the localised area of a fire front particularly where the station being communicated with is on the other side of the fire. The cause is not fully understood as the atmospheric conditions existing in and around a fire front, vary considerably under the influence of a number of factors, for example, smoke, water vapour, intense heat. These effects have been observed in various extreme fires and can affect any network with any equipment, whether they are working on HF, VHF or UHF.

385 THE PRESIDING MEMBER: This is right across the spectrum of frequencies.

MR KEDDIE: Yes. The anecdotal evidence has suggested that the effect may be more pronounced at the higher frequencies, compared with VHF frequencies, by any objective testing.

386 THE PRESIDING MEMBER: What is 420 megahertz?

MR KEDDIE: That is UHF.

387 THE PRESIDING MEMBER: Is that higher than VHF?

MR KEDDIE: Yes, that is correct. The second part of the answer relates to the architecture of the GRNC system. The GRNC will establish multiple base station sites throughout the target coverage area, and mobile radios will be configured to access multiple sites. In the instance where a fire front is between an appliance and a station, communications may be maintained by accessing the network through a base station located on the same side of the fire front as the appliance. This may compensate for the alleged poorer performance

of UHF.

On the matter of compliance with recommendations for the 1983 Ash Wednesday bushfires, the recommendations of the Coroner's report as they relate to CFS radio communications are: insufficient radio channels; radio terminal equipment not consistent or identical throughout the service; and restricted interoperability with other emergency services and the police. The majority of these issues were addressed by the upgrading of radio terminal equipment in the late 1980s.

The CFS's current position in relation to these deficiencies and the GRN are: radios will be provided with 30 simplex channels (which is an increase on the current 20) for fireground traffic; radios will be provided with up to 140 talkgroups with the ability to talk by area (which is dependent on further discussions with the service provider when appointed); all radio terminal equipment will be identical in terms of channels and feature set to enable interchangeability throughout the service; and interoperability with other agencies will be facilitated through the adoption of a single radio communications infrastructure, that is, the GRN.

388 THE PRESIDING MEMBER: At that point, none of those features depends upon the particular selection of Astro Smartzone—or do they? Would any of those other technologies or systems that you referred to at the outset of your remarks be capable of having the same characteristics, features and performance as you have just described?

MR KEDDIE: As I have not done any comparative analysis, I could not answer that.

389 THE PRESIDING MEMBER: You have not done anything?

MR KEDDIE: No.

390 THE PRESIDING MEMBER: Are you aware of anyone who has?

MR KEDDIE: No, I am not aware of anyone who has. In relation to the CFS's approach to the GRN, the CFS has adopted a system engineering approach to its involvement in the Government radio network project. This approach is based on a methodology that has its origins in the United States military for the development of complex systems. Specifically, this methodology involves the identification of a user's operational requirements and the subsequent development of a system requirements specification to establish a functional baseline.

391 THE PRESIDING MEMBER: So the United States military is using Astro Smartzone?

MR KEDDIE: No, this technology is not dependent on this standard.

392 THE PRESIDING MEMBER: Can those characteristics to which you have just referred be accommodated within other systems?

MR KEDDIE: Which characteristics?

393 THE PRESIDING MEMBER: You referred to some characteristics—for example, rectifying the problem mentioned in the Coroner's report of insufficient charges—and you then provided us with four points about a paragraph ago. I asked, and what I want to understand is, whether or not those characteristics to which you referred can be provided by any other system such as Tetra or MPT or Astro 25.

MR KEDDIE: Again, I cannot answer that.

394 THE PRESIDING MEMBER: What does the US military use? You have said the US Infantry seeks the same characteristics.

MR KEDDIE: I am talking about a methodology, a process that is used to develop a system requirement specifications. This process that I am referring to is technology independent.

395 THE PRESIDING MEMBER: Okay.

MR KEDDIE: The functional baseline is essentially a suite of documents that describe a user's requirements in terms of what the system is required to do, and where and when it is required to do it. It is the point at which a user is best positioned to negotiate the provision of services from potential service providers. The CFS has produced its functional baseline documentation and formally released it today to assist in the production of the request for proposal of March 1997. The RFP or request for proposal essentially forms the functional baseline for the acquisition of a radio and paging service on behalf of the whole of Government. The CFS recognises that the request for proposal effectively seeks to acquire services from a service provider rather than select or evaluate a technology.

396 THE PRESIDING MEMBER: Mr Keddie, did the CFS make any assessment whatever of available technologies which could meet its requirements?

MR KEDDIE: No.

397 THE PRESIDING MEMBER: Are you a person with qualifications who could make an objective assessment of different systems, such as Astro Smartzone as compared with Tetra, MPT or Astro 25?

MR KEDDIE: I could do so if engaged to do so, yes.

398 THE PRESIDING MEMBER: Have you ever contemplated the comparable benefits and disbenefits of each or any other technologies available in the market place?

MR KEDDIE: No.

399 THE PRESIDING MEMBER: You have never contemplated that? You have always switched off your mind? In any circumstances you have never contemplated whether Ford is better than Holden; if you are told you will have Holden, you stick with Holden?

MR KEDDIE: Possibly, but I do not think that applies in this instance.

400 THE PRESIDING MEMBER: Do you read much literature?

MR KEDDIE: Yes.

401 THE PRESIDING MEMBER: In any of the literature relevant to your profession are the comparative merits of any of these technologies ever discussed?

MR KEDDIE: I am aware of some articles that I may have read over the time that introduced the technology.

402 THE PRESIDING MEMBER: But you do not remember anything from that?

MR KEDDIE: No. As I said earlier, I have never been required to provide a comparative analysis.

403 THE PRESIDING MEMBER: How much do they pay you? Do not answer that. Are you satisfied that the Government radio network technology, Astro Smartzone, is what the CFS needs?

MR KEDDIE: The CFS is satisfied that the GRNS proposal will meet our operational requirements, yes.

404 THE PRESIDING MEMBER: And you have no idea whether or not any other system would do so?

MR KEDDIE: That is correct; I have no knowledge of that.

405 THE PRESIDING MEMBER: Okay; so you really are not an expert in the assessment of comparable technologies?

MR KEDDIE: That would be correct, yes.

406 THE PRESIDING MEMBER: It seems that the Government does not have one. And you have no idea who selected Astro Smartzone? The CFS was not consulted at all?

MR KEDDIE: No.

407 THE PRESIDING MEMBER: The performance characteristics of Astro Smartzone as compared with any other system available were never considered by the CFS at any time?

MR KEDDIE: That is correct.

408 THE PRESIDING MEMBER: How long have you been with the CFS?

MR KEDDIE: Three years.

409 THE PRESIDING MEMBER: So, can you say that, definitely extending back into the early 1990s, no other system was ever considered by the CFS?

MR KEDDIE: I cannot answer about earlier than my time there.

410 THE PRESIDING MEMBER: Who was the expert the CFS had on staff prior to you?

MR KEDDIE: There was a person called Tony Smith.

411 THE PRESIDING MEMBER: He is an electronic radio and telecommunications engineer?

MR KEDDIE: I am not aware of his formal qualifications.

412 THE PRESIDING MEMBER: I am personally disappointed that you do not have that expertise. I am astonished that the CFS has done no evaluation of any alternative available technology.

413 MR WILLIAMS: Mr Keddie, is it fair to say—or am I completely wrong—that the CFS requirements are dissimilar to those of other Government agencies?

MR KEDDIE: Are you thinking of any particular areas?

414 MR WILLIAMS: The CFS generally operates in much sparser areas, usually more remote from populated areas. It may require more handsets or mobile radios and that sort of thing. In a general way, I want to know whether the CFS has similar or dissimilar requirements to those of most other agencies.

MR KEDDIE: I would say that the majority of requirements we have would be similar to those of other agencies in terms of the abilities in interconnectivity and interoperability. The area in which the CFS operates is probably the area that is most dissimilar, because it is essentially off-road. The use of the GRN wide area paging service is probably the area in which the CFS is most dissimilar.

415 MR WILLIAMS: In the order of priorities is the paging network higher priority or the radio network?

MR KEDDIE: Paging is a higher priority.

416 MR WILLIAMS: Higher than the voice radio network?

MR KEDDIE: In some areas it is, yes.

417 MR WILLIAMS: Have you had the opportunity to look at the systems used by other fire agencies in Australia and overseas?

MR KEDDIE: No.

418 MR WILLIAMS: I will read from a document which alleges with regard to the Smartzone technology as used in New South Wales, that the New South Wales rural fire services have found it so lacking that they have set up their own separate network for use at fires. Are you aware of that?

MR KEDDIE: I am aware that they have made some other arrangements in areas where GRN may have been lacking.

419 THE PRESIDING MEMBER: Does that not worry you?

MR KEDDIE: I am not aware of what the deficiencies are.

420 THE PRESIDING MEMBER: And you did not bother to discover? You are the technical expert for the CFS in South Australia; you were aware that there were inadequacies in this technology in New South Wales and you did not bother to discover why it was so? I leave every other person who is hearing this to make their own judgement about what your answer means with respect to the public interest, Mr Keddle.

MR KEDDIE: As I said earlier, the approach we have taken with the CFS is to look at the operation of what we need to do. The risk in the technology not providing the services is not the CFS's; in fact, it is probably not the Government's I suspect: it is the service provider's.

421 THE PRESIDING MEMBER: Yes; Pontius Pilate said that about 2 000 years ago: 'Not my problem.' This committee has a problem, however: it cannot get an expert who has the wit, wisdom or interest to answer for it the questions it must obtain answers to about the efficacy of the technology, yet we are told and we find evidence in the daily press that the technology has a big question mark over it. I am absolutely amazed that someone employed for their technical expertise in the position in which you are employed has done nothing to investigate those reservations expressed about the performance capacity of the technology in

another Australian application. I am astounded. You have nothing to say about that?

MR KEDDIE: No, I do not.

422 THE PRESIDING MEMBER: You are quite happy to spend the money, even though there is a big question mark over the ability of the technology to perform where it is already installed and already in use; you do not care?

MR KEDDIE: I cannot answer that.

423 THE PRESIDING MEMBER: Why not? You are an expert, are you not?

MR KEDDIE: In areas of telecommunications, yes.

424 THE PRESIDING MEMBER: Does that mean that you are qualified or not qualified to assess these available alternative technologies and to make an objective analysis of where someone or some other agencies found a system to be incapable of providing what it was claimed by its makers to provide? Are you capable of doing that or not?

MR KEDDIE: If required I could do it, but I have not been required to assess the technologies.

425 MR WILLIAMS: I would like to get to the bottom of some talk that the GRN contract will not necessarily provide for or replace all the equipment that the CFS currently uses. Is that true or false?

MR KEDDIE: My understanding is that it will replace all the radio paging terminal equipment.

426 MR WILLIAMS: All the radio and paging?

MR KEDDIE: That is my understanding.

427 MR WILLIAMS: When you say 'my understanding', what level of certainty can this committee take from that?

MR KEDDIE: We have provided DAIS with those terminal requirements and our understanding is that the whole project is cost neutral and will cover those terminal requirements.

428 MS THOMPSON: Do you have that in writing—a nice document that says it? Do you have an assurance in writing from DAIS that the Motorola system would meet all the operational requirements and will be cost neutral?

MR KEDDIE: I am not aware of it in those terms but some assurances have

been given.

429 THE PRESIDING MEMBER: What were you given by DAIS as a statement of the technology capability of Astro Smartzone to meet your needs?

MR KEDDIE: The agreement or understanding the CFS has is that the GRN as proposed using Motorola Smartzone will meet all our operational requirements.

430 THE PRESIDING MEMBER: Is that in writing?

MR KEDDIE: It is in writing; it exists in a document that was jointly developed between DAIS and the CFS.

431 THE PRESIDING MEMBER: Then this committee requires a copy of that document before 1 p.m. today; is that clear?

MR KEDDIE: I will arrange for that.

432 MS THOMPSON: May we add the request for the information about the cost neutrality of the project?

433 THE PRESIDING MEMBER: Yes, that is a fair question, too; the committee must be satisfied that it is cost neutral for the agency to make the switch and, if not, why the higher or lower cost was chosen.

434 MR SCALZI: I understand by your statements earlier that you were not involved in selection of Astro Smartzone. Will you tell us when the Government went down the path of selecting Astro Smartzone?

MR KEDDIE: No, I cannot. I have no knowledge of when that occurred.

435 THE PRESIDING MEMBER: Where did you come from prior to your involvement in the CFS?

MR KEDDIE: The railways.

436 THE PRESIDING MEMBER: And you were involved in the same work in the railways?

MR KEDDIE: Yes.

437 THE PRESIDING MEMBER: How long had you been there?

MR KEDDIE: Twenty years.

438 MR SCALZI: My understanding is that the Government went down the path of selecting Astro Smartzone in early 1993. You are not aware of that?

MR KEDDIE: No.

439 MR SCALZI: So, really, the work you are required to do is not to compare the systems but to assess whether the particular system that was chosen meets the requirements of the CFS?

MR KEDDIE: I must assess whether the services that will be delivered by the GRNC will meet the requirements of the CFS.

440 MR SCALZI: And are you satisfied about that?

MR KEDDIE: At this stage, yes.

441 THE PRESIDING MEMBER: On what basis are you satisfied when you have read that the New South Wales application of the same technology does not work?

MR KEDDIE: We are talking here about the services to be provided under the services-based contract for the CFS which, as I understand it, is the extent of the GRNC. It is a services-based contract. The technology was set some time previously; so, we must map our operational requirements to the service delivery requirements of the GRN.

442 THE PRESIDING MEMBER: You are satisfied that it will work?

MR KEDDIE: Yes.

443 THE PRESIDING MEMBER: Even though you know that in New South Wales it has not worked?

MR KEDDIE: Yes.

444 THE PRESIDING MEMBER: Have you not bothered to check out why?

MR KEDDIE: No.

445 THE PRESIDING MEMBER: What does that mean; you have not bothered?

MR KEDDIE: I have not had the need to do it—the opportunity.

446 THE PRESIDING MEMBER: But you have had a need to do it because you have had to say that this system will work for the CFS.

MR KEDDIE: I am not saying that, by itself, the Astro Smartzone system will

work. I am saying that the services delivered under the GRNC will meet CFS operational requirements, and that the choice of technology is not for the CFS to comment on.

447 THE PRESIDING MEMBER: You are not expert to comment on it, anyway. You see, you are appearing before this committee as Mr David Keddie. I do not care in which agency you work or, in fact, whether or not you work in an agency: you are summoned before the committee to give it evidence about your technical knowledge. The committee will come to its own conclusions about your competence and willingness to cooperate with it in making its inquiries to satisfy itself, as a subset of the Parliament, that what is being done is in the public interest.

We are talking about a lot of money. A big part of our stated reasons for making the switch is to satisfy the needs of the CFS and to do that in the most cost efficient manner so that we maximise the benefit for the dollars outlaid—and there are 267 million of those. Mr Keddie, reflect upon what you have told the committee this morning. I am disturbed, where I expected to be satisfied before this meeting that those answers would be available to us, and I am also disturbed with the information that I have received to date. Having reflected upon your answers, is there anything else you wish to say to this committee about the appropriateness or otherwise of that technology?

You are under parliamentary privilege and that means that there can be to you no adverse implications for answering within your professional knowledge and not answering in your, if you like, vocational role. You are here because of your professional knowledge. Is there anything further you can tell the committee to enable it to come to valid conclusions about the advisability, or otherwise, of this system and the technology it employs called Astro Smartzone?

MR KEDDIE: I can add nothing further to what I have already said.

448 MS STEVENS: The report from Ericsson Consulting makes a number of claims which I find disturbing. First, it states that, despite the claim that CFS units will be able to use the network in an emergency, even if the local exchange goes down, there may be 'circumstances where it does not work'. Can you comment in relation to technology meeting all your requirements?

MR KEDDIE: That claim relates to the paging services. Recently commenced is the failure mode and effects criticality analysis, which is required to operate in any system involving the safety of personnel. The analysis looks at the potential failure mechanism within any system or architecture. That Ericsson discussion paper alerted us to the fact that local exchanges, as a result of changes that are occurring to the Telstra network, are not necessarily capable of operating if they are isolated from a larger network. That has an implication for our dispatch mechanism.

449 MS STEVENS: What implication?

MR KEDDIE: Take, for example, the current model where dispatch is carried out at a local level. That involves call receipt through the local telephone exchange. If the local telephone exchange is not available, the call is diverted to a default call centre. So, under the GRNC the wide area pager will still allow that brigade to be called out because, if the call is not received locally, it is diverted to a centralised answering point.

450 MS STEVENS: Forgive me; I want to be clear. Are you saying then that that will not be a problem? You disagree with that finding contained in the Ericsson report? I need for you to repeat that to me. I am not clear about what you are saying.

MR KEDDIE: I am saying that in the delivery of CFS services where we need to use telecommunications we must plan; we must have some contingent action for the availability of those services. The Ericsson paper highlighted a situation that exists with local exchanges. So, subsequent analysis with the service provider when appointed will enable us to identify these areas and introduce the appropriate contingent action.

451 MS STEVENS: You are saying then that you will need to do more things in relation to the situation. You will have to put in other strategies to ensure that you get the service you require?

MR KEDDIE: That is correct.

452 MS STEVENS: Essentially, you are saying that there are problems and that, in order to fix those problems, you will have to introduce something else?

MR KEDDIE: I am not saying that there are problems. It is the nature of the system with which we are dealing, in this case, the Telstra network.

453 MS STEVENS: The nature of the system means that you will have to develop, or introduce, other systems to make it complete?

MR KEDDIE: Other systems probably will not be technologically based: it will be an operational procedure.

454 MS STEVENS: What are we looking at in terms of costs?

MR KEDDIE: Any introduced system will involve operational procedures.

455 MS STEVENS: What are we looking at in terms of costs? Are costs involved with these additional systems?

MR KEDDIE: By 'systems' do you mean operational procedures?

456 MS STEVENS: I am concerned that a large amount of money is being spent on this contract. This Ericsson Consulting report talks about circumstances in which that system

will not work. You are saying that other systems need to be put in place to supplement it and to ensure that it works. What is the cost of those additional systems?

MR KEDDIE: I cannot provide that information.

457 THE PRESIDING MEMBER: That goes to Mr Keddie's professional competence.

458 MS STEVENS: You are saying that there would be some cost. You cannot tell me how much, but there would be some.

MR KEDDIE: No; not until we know what contingent actions might be required.

459 MS STEVENS: There will need to be contingent actions. You are not sure what they are and, unless you know what they are, you will not know how much they cost?

MR KEDDIE: That is correct.

460 MS STEVENS: The Ericsson report also states:

There are extra risks that cannot be eliminated arising from the decision to have a centralised architecture for the paging system. These risks include a possibility of central system failure.

Can you comment on that claim?

MR KEDDIE: Again, my comment is related to the process which I described previously, namely, that we need to identify contingent actions to be taken in the event of a failure.

461 THE PRESIDING MEMBER: You have told us that you are not competent. You have done no evaluations of any alternative technologies and what their features might be. So, I think that fairly and squarely answers that for us. Mr Keddie is not competent.

462 MS THOMPSON: The Astro Smartzone system has been around for a long time. I am wondering about its optimum operational life.

MR KEDDIE: I cannot answer that question.

463 MS THOMPSON: I am in possession of information from the State Emergency Services—

464 THE PRESIDING MEMBER: Mr Keddie says that he is not competent. We can save time and put it on the record and say that he is not competent.

465 MR SCALZI: Are you aware of the present maintenance costs of the CFS with regard to the systems it presently has?

MR KEDDIE: I am aware of the costs generally, yes.

466 MR SCALZI: With respect to the ongoing costs to maintain the present system, do you think it would be more or less than maintaining a GRNC system?

MR KEDDIE: My understanding is that the GRNC is cost neutral, which includes maintenance.

467 THE PRESIDING MEMBER: Cost neutral to the agency. I do not think it is within Mr Keddie's competence, either professionally or in his role within the agency, to answer questions about cost. He has stated that his competence relates to the technological area—nothing to do with economics. We are short of time, Mr Scalzi. It is not appropriate to question Mr Keddie about cost. It seems that it is equally useless to question him about the technological capacity in comparable systems.

468 MS STEVENS: I understand that there will not be a compatibility between South Australian CFS and Victorian CFS operations. Can you tell me whether that is correct and, if it is, is that not a problem?

MR KEDDIE: The GRN, as proposed here, and the Victorian network have implemented their respective operations on different bands using different standards. I believe that the systems are incompatible. The Victorian CFS has provided standard terminal equipment in all its appliances that are required to respond in Victoria.

469 MS STEVENS: If you were intending to upgrade all your communications technology, would you not be wanting to get a system that was as compatible as possible with other firefighting agencies, particularly around State borders?

MR KEDDIE: The interoperability, particularly with the Victorian CFA, is achieved through the provision of CFA compatible equipment in CFS appliances. CFS appliances responding in CFA territory can operate on a CFA network.

470 MS STEVENS: Translate that into layman's terms for me. Does that mean that you have another set of equipment with which you can talk to them? Is that what you mean?

MR KEDDIE: A second set of equipment in the appliances, yes.

471 THE PRESIDING MEMBER: Before you leave us, with whom did you discuss what you would present to the committee this morning—anyone?

MR KEDDIE: Yes, my manager, technical services.

472 THE PRESIDING MEMBER: Who is that.

MR KEDDIE: Arthur Tindall.

473 THE PRESIDING MEMBER: Did you discuss the suitability of the technology of the system with anyone at all?

MR KEDDIE: No.

474 THE PRESIDING MEMBER: Have you ever discussed that with anyone at all?

MR KEDDIE: No.

475 THE PRESIDING MEMBER: How did you come to the conclusion that it would be suitable for the CFS?

MR KEDDIE: I have not really come to the conclusion that it is suitable for the CFS. As I stated earlier, the service to be delivered by the GRNC contract is suitable for the CFS.

476 THE PRESIDING MEMBER: You tell us that you do not know what the deficiencies are and you have asked nobody, so they cannot evaluate it if you do not tell them what they are. The astonishing thing to me is that you say it can deliver, it will be suitable, yet you acknowledge that there are likely to be deficiencies and you are almost certain there are, but you have done nothing to identify what they are, quantify the consequences and enable someone else to quantify the dollars that will be needed to fix them up afterwards.

477 MS THOMPSON: What is the roll-out period? How long do you expect before all CFS—

478 THE PRESIDING MEMBER: It is not within Mr Keddie's competence to answer that.

THE WITNESS WITHDREW

ADDITIONAL WITNESSES:

COLIN CORNISH, Chief Inspector, South Australia Police, GPO Box 1539, Adelaide 5000, recalled and further examined; and JOHN STRADIOTTO, Manager Support Services, South Australia Police, GPO Box 1539, Adelaide 5000, called and examined:

479 THE PRESIDING MEMBER: Mr Cornish, thank you for appearing. Do you wish to say anything to the committee?

MR CORNISH: I wish to answer some questions that were raised by this committee last time I appeared. I was asked to review what had happened in New South Wales and give a brief summary on a *Sydney Morning Herald* report dated 9 February 1999. It was headlined: "It is a cover up," says man who missed out on police contract.' I have read that report and from discussion with others it is obvious that it relates to the purchase of control consoles for the New South Wales Communications Centre. It really does not relate to a radio network. In fact, it is the interface between the dispatch system and the radio network. From my inquiries, the matter relates to the circumstances of the awarding of the contract. It is an issue of probity and integrity and has been reviewed by the Independent Commission Against Corruption. I do not believe there was any criticism of the radio network in that report.

I have a brief comment on the New South Wales network. I have seen its network operating control centre—the GRN one—and I have spoken to police officers involved in their current communications systems and to the planning officers who are planning future communications systems. When the GRN was built in New South Wales, it was built as a small network with the intention of expansion at later dates. If you look at the sum that was spent on the network initially—it was about \$21 million—you realise that it is not in the same ballpark as that proposed in South Australia. It was not initially intended for a large radio communications system such as the New South Wales Police required until a significant development coverage expansion had occurred. Those agencies that used the network in the early phases—and I understand they were mainly utility departments, including the water utility—praised its ability and reliability. That was probably because what they had at the time was quite inappropriate. It may have been a case that anything was better than nothing.

480 THE PRESIDING MEMBER: Was it as good as the South Australia Police communications at that time?

MR CORNISH: No, it was very poor. Whatever they went to they would have praised. They supported the new GRN system's reliability. I now refer to the *Advertiser* article of 3 January 1995, which you passed onto me, with the headline 'Failed police radio system to be bought for \$20 million'. The New South Wales Police is still not on a Government radio network and was not at that time. Last year I spoke to the planners and communications

personnel within New South Wales Police and, because of the significant progression of the GRN in New South Wales, they are anxious to go to a trunk network system as their preferred radio network.

I would like to answer another question that was put to me. The committee wanted me to say why the Astro Smartzone system is superior to any other on the market, in my view, and superior to existing communications systems and resources that are needed. I have put together a list of points.

481 THE PRESIDING MEMBER: Do they also relate to the existing police network?

MR CORNISH: They relate to the upgrades and improvements that happened in the existing police network. It is my understanding, and I know this is correct, that when we speak about TETRA in Australia we are talking about something that does not exist because there are no products within Australia that we can purchase that support TETRA complexities or band widths. What is available in the European TETRA band is put aside for the Australian Defence Force. When we talk about TETRA products in Australia, they do not exist, which give us a very limited opportunity to choose a network.

482 THE PRESIDING MEMBER: Are they available in any other marketplace in the world?

MR CORNISH: Yes, but they do not operate in the band widths available to us.

483 THE PRESIDING MEMBER: Is that band dedicated to some other purpose in Australia?

MR CORNISH: It is dedicated to the Australian Defence Force because of its encryption capabilities and, understandably, it is reluctant to give up those band widths.

484 THE PRESIDING MEMBER: TETRA is not available to us?

MR CORNISH: In five years time it might be available to us, but at this time it is not. I would like to say something about the Smartzone system. At the back of my document is a list of 42 organisations worldwide that use the Smartzone system. The committee will notice that a number of police forces and departments use the system, including the London Metropolitan Police, which has 23 000 users, and the Royal Canadian Mounted Police, which has a similar establishment to the South Australia Police. Although I have not had the opportunity to see any of these systems in operation, I have read about them and discussed some of these networks with people involved. I have yet to come across any serious complaint about their operation.

485 THE PRESIDING MEMBER: Does the reference to the City of Cleveland

relate to a police force?

MR CORNISH: No, they are council type areas.

486 THE PRESIDING MEMBER: Whole of Government?

MR CORNISH: Yes.

487 THE PRESIDING MEMBER: Likewise, Enrico County?

MR CORNISH: Yes.

488 MR SCALZI: Are you telling us that, even if we had the ability to choose the TETRA system, given the support systems within Australia, it would not be viable?

MR CORNISH: At this point no terminal equipment is compatible in Australia with a TETRA system.

489 THE PRESIDING MEMBER: What about other technologies?

490 MR SCALZI: May I finish?

491 THE PRESIDING MEMBER: You answered by being specific about TETRA. I want the answer to Mr Scalzi's question in the general case.

MR CORNISH: A lot of them are technologies that are still being developed, and on this point I will defer to Mr Stradiotto, who is more technically minded than I am. The Tasmanian Police use a truck radio system, which is available in the 800 megahertz band. That has been established by Ericsson. I do not think it is suitable for South Australia because it would increase the cost of the Government radio network by many millions of dollars. It is a UHF band in a higher frequency that would require many more towers because of the penetration.

492 THE PRESIDING MEMBER: Are you saying that that system is dearer with no additional benefits?

MR CORNISH: Yes.

493 THE PRESIDING MEMBER: Why do you suppose Tasmania selected it?

MR CORNISH: Because of its topography. It is not one that South Australia would contemplate from a policing point of view.

494 THE PRESIDING MEMBER: Mr Stradiotto, do you share the same view?

MR STRADIOTTO: Yes, I share the same view.

495 MR SCALZI: Mr Cornish, given the information technology landscape within Australia, is Astro Smartzone the most viable system for South Australia at present?

MR CORNISH: Yes. I would have to say that choosing a network must be done with a view to selecting horses for courses. We live in a State that is large, remote in places and quite barren in lots of places. We have a number of widely spread population centres with only small populations. One must consider the cost for benefit value. When we look at topography and population centres, and given that we have to try to limit the number of towers and infrastructure that are required, we must look at something flexible. In my view, the Astro Smartzone system offers that flexibility in the 400 megahertz band. The Presiding Member used the analogy of choosing Commodores over Fords. When looking at the Astro Smartzone system it is like looking at a Commodore with full options as something that the police require, but the CFS might require a Commodore without air-conditioning. In other words, we can choose between digital or we can have an analog system, and that relates to cost. Analog is cheaper; digital is more expensive. The Astro Smartzone system offers that choice. The TETRA system offers only a digital system, which is very expensive.

496 MR SCALZI: Are you telling us that we could have an excellent suit that fits me but that it would be hopeless for the Presiding Member because it would not fit him?

MR CORNISH: Absolutely. My example is that the Country Fire Service relies a lot on a paging service, because it is a very efficient service. That is not suitable for the Police Department. We do not dispatch on a paging service.

497 THE PRESIDING MEMBER: Do you know anything about MPT and APCO 25?

MR CORNISH: I know a bit about APCO 25, which is a complete digital system that is not available in Australia at the moment. It is a very expensive system.

498 THE PRESIDING MEMBER: It is not available in Australia?

MR CORNISH: APCO 25 is not fully available to us in South Australia.

499 THE PRESIDING MEMBER: What about MPT?

MR CORNISH: I have no knowledge of MPT.

500 MR SCALZI: Would you be able to tell us when the Government and Government agencies first started looking at Astro Smartzone technology?

MR CORNISH: I know that the Police Department was surveyed extensively about its requirements and needs in the early 1990s, and Mr Stradiotto spent a lot of time asking questions about our communication needs in preparation for a choice of network systems.

501 MS STEVENS: The New South Wales Police found that the Astro Smartzone GRN did not provide the security needed for police work. How has the South Australian Police Department dealt with that issue and are there any problems that you can see?

MR CORNISH: The Smartzone system offers three levels of security. The New South Wales Police Department was talking about an analog system, which is an open system. With the proposed GRN, we are talking about a digital system which offers a level of communication security. The next level up from that is an encrypted system, which we hope to establish as well, which offers a high level of security. Other higher encryption languages are available to us at a later stage if required. I believe that, if we choose the Smartzone system, a general encryption system will be available to the police, which is not something that we have experienced before.

502 THE PRESIDING MEMBER: You have never had access to it?

MR CORNISH: We have had access to encryption digital voice protection (DVP) on a small and limited basis.

503 THE PRESIDING MEMBER: What do you mean by 'small'? Small in number or small in area, or both?

MR CORNISH: We could only use it in certain pieces of equipment and it never gave clarity of communication because of the technologies involved. It was being used on an analog system which in some cases was quite unsuitable for the encryption that was used.

504 THE PRESIDING MEMBER: It was a tone mincer?

MR CORNISH: Members could imagine circumstances in which radio is used by critical incident units such as the Star Division, and communications that could be vital to life and death in one phrase have to be transmitted on such wavelengths and bands.

505 MS STEVENS: I did not have an opportunity when you gave evidence last week to refer to your submission. On page 5 you have listed a whole lot of concerns in relation to this contract. In the submission you say:

Treasury have stated that the cost to agencies will be budget neutral, but it is anticipated that there will be significant cost to the South Australian Police for activities associated with migration to the GRN.

You then list a whole lot of things, including project management costs and training costs.

You say:

It is expected that all major migration costs would be met from the funding emanating from the GRN.

What is your estimation of the major migration costs from the list of things that you have given? What about the costs of non-major migration procedures? How much are you looking at? I presume that only major migration costs would be met by the funding from the GRN and that non-major costs are to be picked up by the Police Department. Can you confirm or comment on that?

MR CORNISH: I guess that the major migration costs are the \$247.7 million, as has been costed for the implementation.

506 MS STEVENS: That is the entire cost, it is not just for yours, I hope.

MR CORNISH: Obviously, there will be costs that perhaps we have not even considered yet, except as a title. To drill down to what those actual figures would be would be quite an imposition at the moment.

507 MS STEVENS: In other words, you are saying that you cannot answer that; you do not know what the final costs are?

MR CORNISH: In dollars and cents. All I can do is highlight areas as I have done in the submission where I believe that there would be some costs that obviously SAPOL will have to fund from its own resources.

508 MS STEVENS: As I read this, all agencies are saying that they understand this will be budget neutral. You have all these things listed. You say that you expect the major costs will be covered through this budget neutral agreement or understanding, but are you also saying that there may be other costs, as yet unknown, that the Police Department will have to pick up?

MR CORNISH: Yes, I am. One of the reasons I am saying that is because, first, I am not privy to any contractual and funding arrangements; and, secondly, as with the Commissioner of Police, I am concerned about some costs that may have to be resourced from within our own service, and some of those areas would include such things as site decommissioning for transmission sites we currently own to return that land back to its natural state.

509 MS STEVENS: You have no idea what that would be?

MR CORNISH: I do not even know what the complete list of sites required by the GRN is at the moment.

510 MS STEVENS: Are there any contingencies in your budget now for those non-major unknown costs?

MR CORNISH: No, no funds have been put aside to cover these costs. However, at this stage I think it is sufficient to highlight that these costs are a potential need.

511 THE PRESIDING MEMBER: You do not have a responsibility for it within SAPOL, anyway?

MR CORNISH: I certainly have a responsibility.

512 THE PRESIDING MEMBER: Within SAPOL?

MR CORNISH: Not to fine costing. I certainly have a responsibility to discuss these matters with my superior officers.

513 THE PRESIDING MEMBER: I accept that and I appreciate the frankness with which you have answered the committee's inquiries about those matters, but the finer detail of it would be known perhaps to someone else within SAPOL?

MR STRADIOTTO: I suppose we identified this area as part of our transition planning process, in that obviously our Commissioner was concerned about any hidden costs. These are items that we have raised as concerns because we will not know answers possibly until the contract is signed and we get further information from the contract group as to what our commitments are exactly.

514 THE PRESIDING MEMBER: Given that it will be cost neutral in the first instance to the agency, as the first year or so of operations goes by do you expect that the top up required from other sources—Treasury consolidated revenue—to be in the order of a few million dollars, a few tens of millions or a few hundred thousand?

MR STRADIOTTO: Under the few millions; hundreds of thousands, if that.

515 THE PRESIDING MEMBER: It is under a million?

MR STRADIOTTO: Yes.

516 THE PRESIDING MEMBER: So it is no big deal considering the total of \$267 million?

MR STRADIOTTO: Not at all.

517 MR SCALZI: When we are talking about the cost neutrality of maintaining a system, I believe we should separate the migration aspect. Once that has taken place, do you

envisage that the maintenance of the GRN will be more or less than the current cost of maintaining a system? In other words, it will be more efficient. For example, if we look at what a car cost 10 years ago, obviously buying a new car today will cost you more but the maintenance should cost you less. Would that be the case?

MR CORNISH: I think there must be economies of scale within the equation. We are talking about maintaining a radio network that will serve about 17 organisations. Currently, each of those organisations puts resources into maintaining its own network. If there is one service provider that is maintaining one network that provides service to all those organisations, I think there must be an efficiency.

518 MR SCALZI: The fixed costs will be spread over all the organisations, so the cost per organisation should be reduced in the long run, if it is efficient.

MR CORNISH: I think that is a question that should be answered by Treasury.

519 THE PRESIDING MEMBER: I agree with that. Mr Stradiotto, you have some remarks that you wish to make. I am interested to hear what you have to say if you can tell us something that will enable us to come to a clearer understanding of the benefits that are likely to accrue and the risks that there are in the adoption of this system in South Australia. And I repeat for your benefit as I did for Mr Keddie: you are here not as a representative of the South Australian Police Force but as an expert witness, and your evidence is important in the public interest. This is a committee of the Parliament, it is not a function of Government—there is a difference. The public interest is what this committee's job is about.

MR STRADIOTTO: I am the Manager of the Communications Support Section. I am a public servant in the Police Department—an underpaid public servant, by the way, just to clarify that one.

520 THE PRESIDING MEMBER: I am sure your wife agrees.

MR STRADIOTTO: My qualifications are Bachelor of Engineering and Electronic Engineering. I started with the Police Department direct from university in 1989. So I have began in the junior rank within my division and worked my way through to taking on the management role in 1995. Effectively, I am accountable to the Manager of the Computing Communications Section for the delivery of the engineering services as a major contribution in the provision of the most effective and efficient departmental electric systems throughout the State. The majority of the systems that my area looks after are associated with radio, telephone and data carriage.

521 THE PRESIDING MEMBER: Do you think there would be much difference in the way in which the police communications systems have to operate where they do not rely on land line compared with the way in which the CFS, the ambulance and so on would have to operate, or would the technologies the police need to have cover pretty much the areas that

they have to cover?

MR STRADIOTTO: In terms of radio-voice communications, yes.

522 THE PRESIDING MEMBER: When the police want to contact an officer who is off duty and call them back on duty, do they use paging?

MR STRADIOTTO: There are special task routes. As Mr Cornish suggested before, the use of paging is not a dependent service within the Police Department, other than some core task groups such as our Star Division for call out and also some crime associated groups.

523 THE PRESIDING MEMBER: Will this system enable you to expand the use?

MR STRADIOTTO: With regard to paging, at the moment we rely on carrier based services. We have no private, independent paging network other than one small little system in Coober Pedy which effectively is used for general administration. We did not identify the benefits in our initial functional requirements; that is, our need for the paging service *per se*. However, we acknowledge that the paging service that has been offered (or hopefully being offered) will definitely provide a far more enhanced service than what we could ever get from a carrier service, so we should renew the opportunity of taking those services on when offered.

524 THE PRESIDING MEMBER: Do you have anything further you want to say?

MR STRADIOTTO: I was going to give a brief overview of the communication systems we use. We have a metropolitan UHF system—and I am covering previous grounds. The UHF system, which goes from Gawler through to Victor Harbor, is basically controlled from our Communications Centre and Operational Division. However, they are the responsibility of the local supervisor for that particular area. The metropolitan area is split into about six local service areas, although I may be wrong because we have just undergone a restructure and I cannot remember off the top of my head. We have the six areas within the metropolitan area basically receiving tasks from a centralised communications centre. That is the metropolitan system. The country system below or south of Hawker relies on a VHF high band system. It is localised commander control led mainly because we do not have the infrastructure to link all the sites together. That was a phase in our roll out.

525 THE PRESIDING MEMBER: Do you mean that you do not have antennae and things such as that?

MR STRADIOTTO: In the metropolitan area we have our sites which effectively are land lined back to our Communications Centre. Our Communications Centre is 100 per cent reliable for communications with each of the sites and then a radio medium talks to the terminal devices. Patrols request their mobile radios and the portable radios within the

facility of the site. In the country, we do not have that linkage from site to site going back to a centralised point.

526 THE PRESIDING MEMBER: But Astro Smartzone does?

MR STRADIOTTO: That will be one of the most significant benefits we will get out of this system.

527 THE PRESIDING MEMBER: Will that be fairly secure?

MR STRADIOTTO: Yes. In relation to security, our requirement was to employ encryptions—to use a digital protocol with encryptions.

528 THE PRESIDING MEMBER: So you can do that for the long haul messages. Can you do it for the short haul messages using Astro Smartzone, the technologies and systems that can hang off?

MR STRADIOTTO: In the country it is basically radio and data. The encryptions and voice will occur from the terminal and it is transparent within the infrastructure.

529 THE PRESIDING MEMBER: It is transparent between the infrastructure. Therefore, a scanner will be able to pick up that?

MR STRADIOTTO: No, it is encrypted from the terminal device.

530 THE PRESIDING MEMBER: 'Transparent' means what?

MR STRADIOTTO: It stays in its encrypted format until it gets to the other terminal division at the other end, unless you have a terminal device that is capable of decrypting it and, to my knowledge, no such device exists.

531 THE PRESIDING MEMBER: The police have to be the ones, do they not?

MR STRADIOTTO: Yes.

532 THE PRESIDING MEMBER: So, if someone had enough money they could buy one?

MR STRADIOTTO: No, we use strict protocols on encryption; there is the OFBE standard.

533 THE PRESIDING MEMBER: If someone had enough money, could they buy one from somewhere in the world?

MR STRADIOTTO: That would be difficult, because the product cannot be released from the United States without a licence from the United States Government; that is the first initiative. Then there is a distribution licence restriction on the Motorola Smartzone product. Motorola is the only distributor from which you can buy that product and obtain that licence.

534 THE PRESIDING MEMBER: Is it fairly secure?

MR STRADIOTTO: Yes.

535 THE PRESIDING MEMBER: I am anxious for the committee to understand this. Given your professional qualifications in the area, do you read much about these kinds of communications?

MR STRADIOTTO: Yes.

536 THE PRESIDING MEMBER: Do you come across articles that make comparisons between the various technologies that are available?

MR STRADIOTTO: Yes.

537 THE PRESIDING MEMBER: Are you satisfied that the system we purchased is as good as anything else that is available to us in Australia at present?

MR STRADIOTTO: At present, it is most likely that it is the only system available that will do the job required. With regard to other technologies, you would have to wait another year or two to get the full features we require. The particular area of concern is the end-to-end encryption and also the direct mode capability that enables a user to talk to another user independent of going through the infrastructure.

538 THE PRESIDING MEMBER: I need to clarify two other things for the benefit of the committee. Are you anxious about the failure in this State of the system given what has happened in New South Wales? Are you anxious about that as it would apply in South Australia? We do not have the technological expertise to understand what has happened in New South Wales and whether or not the allegations are valid. We cannot assess that. I am asking you as an expert in this arena to tell us in the public interest whether you think any problem for South Australia is illustrated by the alleged experience in New South Wales?

MR STRADIOTTO: I have had discussions with fellows from the New South Wales police. From discussions with them, it was apparent that they did not have any problems with the technology *per se*. In fact, they most definitely supported my views on it. The reason they have not migrated is that the coverage is not there.

539 THE PRESIDING MEMBER: What do you mean by `coverage'?

MR STRADIOTTO: The positioning of the site does not provide adequate coverage.

540 THE PRESIDING MEMBER: Are you referring to the antenna used to transmit the messages not providing a sufficiently dense signal across the Blue Mountains?

MR STRADIOTTO: Yes.

541 THE PRESIDING MEMBER: In effect, they are getting into places where there are no radio waves, so they cannot send or receive transmissions; is that correct?

MR STRADIOTTO: I do not know the full figures.

542 THE PRESIDING MEMBER: Are you worried about South Australia?

MR STRADIOTTO: No, not at all.

543 THE PRESIDING MEMBER: South Australia has the density of transmission sites for areas, terrestrial locations or whatever they call it?

MR STRADIOTTO: Before we migrate, we will do our own pilot studies to ensure that we can present it to the GRN group.

544 THE PRESIDING MEMBER: Would that same assessment be relevant in the applications of the CFS?

MR STRADIOTTO: I suggest that the CFS does its own independent tests as well.

545 THE PRESIDING MEMBER: Maybe so, but I am asking you as an expert.

MR STRADIOTTO: Yes, in terms of the CFS's communications, because the availability we have asked for is 99.95, which effectively means you can only get up to 26 minutes of outage in any one year. That extra digit on the end makes a significant difference; it is 99.95. If the vendor designs for the service levels we requested, we will definitely have a far superior network than we presently have from a policing perspective.

546 MS STEVENS: Are you saying that, if the vendor designs the system to your needs, you will have a significantly better system?

MR STRADIOTTO: Yes, I did say that. That is all I can say.

547 THE PRESIDING MEMBER: That is not something you can answer; we will have to get Mr Fowler to answer that. We will have to satisfy ourselves that that will fall within the limit of the money available. How long will it last, and why will it be then less operationally suitable than something else? Will it have worn out, or will it be so superseded by that time that it warrants being pulled apart, scrapped, sold off and replaced?

MR STRADIOTTO: There are three independent systems, and the paging system will last until the 10 year period. On the radio side of things, based on the Smartzone Omnilink system, that will last at least a similar period, and the infrastructure itself will be capable of being upgraded to various different versions. It is firmware upgradeable.

548 THE PRESIDING MEMBER: What is firmware?

MR STRADIOTTO: The operating system for the devices. Effectively, you can have your PC hardware upgrade from Windows 95 to Windows 98 in order to get better functionality.

549 THE PRESIDING MEMBER: Firmware fits between the software and the hardware?

MR STRADIOTTO: Yes.

550 THE PRESIDING MEMBER: Sort of like a corset?

MR STRADIOTTO: Of course.

551 THE PRESIDING MEMBER: Do the emerging technology of LEOS low orbit satellites provide the prospect of a better system again if and when they get into place?

MR STRADIOTTO: Here we are trying to forecast the future. Ideally, we wanted the system several years ago.

552 THE PRESIDING MEMBER: If there is a Model T Ford, you cannot wait for a 1928 Buick; is that what you are saying?

MR STRADIOTTO: Yes, one of the concerns I have with the LEOS system is that the police depend heavily on broadcast communications; in other words, when we do a transmission, we communicate to everyone who is a member of that area. LEOS possibly will have difficulty doing that. The LEOS system is to be treated more like a phone. There are obviously developments in trying to deliver broadcast-based communication systems with them, but they are some time in the future.

553 THE PRESIDING MEMBER: In your opinion, is it worth waiting and patching up the current system until some of those other systems are available, either because they do

not have all the features of Astro Smartzone, or they will cost more and deliver no greater benefit in significant terms for South Australia's needs?

MR STRADIOTTO: Yes, that is correct.

554 THE PRESIDING MEMBER: You tell me; I am asking you.

MR STRADIOTTO: You mentioned the MTT1327 as a viable protocol. That is one of the very early initial trunking solutions ever delivered. It would probably be a cheaper solution, but it would not meet police needs at all, as its call set up times are too long, and it has a fair few other problems.

555 THE PRESIDING MEMBER: What about the APCO 25?

MR STRADIOTTO: That has been recently renamed Project 25. Here again, the system being delivered is capable of having a firmware upgrade to be Project 25 compliant if required. The decision perhaps to not implement that initially is because it would be an additional cost considering that the majority of other agencies are happy to stay at the analog mode of operation. There is another benefit of the Smartzone system, and that is that it is capable of dual mode— analog as well as digital.

MR CORNISH: It is of the utmost importance that police are able to transmit from within buildings—usually the front bar of a pub on a Saturday evening. Satellite transmission cannot offer complete building penetration, so satellite communication is not a viable option for us.

556 THE PRESIDING MEMBER: Are terrestrial aerials better at different frequencies?

MR CORNISH: Yes, distance is involved, as well as topography and barriers. It is true that the higher you go with frequency the more penetration within a building you get.

557 THE PRESIDING MEMBER: Are all radio waves electromagnetic radiation?

MR STRADIOTTO: Yes.

558 THE PRESIDING MEMBER: Is there any difference between the effect on living tissue of the radio waves that emanate from mobile phones and others that emanate from other radio systems? Would you expect there to be a different effect?

MR STRADIOTTO: I am not exactly 100 per cent sure of the Australian standard on radiation hazards, but I think it is from about 30 kilohertz to 1 gigahertz range. Effectively, X-rays are electromagnetic.

559 THE PRESIDING MEMBER: From short wave to X-ray?

MR STRADIOTTO: They are all electromagnetic. This irradiation of surface tissue has a heating effect on the cells.

560 THE PRESIDING MEMBER: It must be nearly as serious as exposing yourself to a freshly struck match! You seem to have some breadth in your willingness to communicate that to us. The committee may be compelled to consider whether or not one frequency band is more or less safe than any other band. If you know of any scientific evidence that would indicate that a frequency band was more or less safe to use than another, I would be pleased if you told us of it now.

MR STRADIOTTO: In terms of hazards, I have no concerns. However, the issue with the choice of frequency band is the available band from which we have to choose at present. Effectively, under the Australian current band plan and the utilisation of those resources, the GRT team has been from 409 to 420 megahertz. That is the only contiguous frequency spectrum available to operate the infrastructure we require.

561 THE PRESIDING MEMBER: They are no more or less likely to cause health hazards than mobile telephones, commercial radio broadcasts or lightening strikes. To the best of your knowledge, is that true?

MR STRADIOTTO: The area of concern is more gigahertz.

562 THE PRESIDING MEMBER: Are they closer to X-rays?

MR STRADIOTTO: They are very high frequency, yes.

563 MS THOMPSON: Last week you talked about the benefits of security that come out of the proposed new system with curtailing the ability to harass operators. However, there is another side to that, and that relates to the ability of the media, for instance, to understand what is going on, which I gather is beneficial both to them and to you at times when there are incidents going on and you have independent witnesses. How are you able to work with the media to meet their needs and your needs relating to this?

MR CORNISH: That is a very good question. We have had discussions with media representatives concerning this. It is no secret that the media scan our broadcasts.

564 THE PRESIDING MEMBER: Are they supposed to?

MR CORNISH: I do not think it is illegal, so long as they do not use the information for any illegal activity. Obviously, they use it to get to the scene of newsworthy incidents. If the GRN becomes a reality, our broadcasts will be encrypted and gobbledegook to anyone who listens to them. The media are more interested in our dispatching incidents,

because that is where they get the main information from. We have had discussions with the media, and we have come up with a couple of solutions to their listening to our bandwidths. However, they are just possibilities at present. It is possible that we could page designated incidents through paging systems to them. We could highlight a type of incident, whether it be an armed holdup or a large fire, on a bulletin board where they could instantaneously grab that information and make contact with our media liaison officers to further develop the story. There are a number of fields from which we would keep away with those networks, and they would include the names and addresses of people involved. That would pinpoint locations where more serious incidents had occurred. We are in the early stages of discussion about that, but there are alternatives. We recognise that the media need opportunities, and we can aid in the development of that process.

565 MS THOMPSON: On page 5 of your previous submission, you list some of the normal expenditure. One issue was 'Human resources reallocation—retraining or separation costs'. What is that about?

MR CORNISH: If a service provider has taken over a complete communications service provision—and I guess, given our positions within our resources and communications and radio maintenance areas will no longer be required—there are opportunities for those people to be seconded, to go full-time with the service provider or be retrained and reallocated in other areas of the Police Department.

566 MS THOMPSON: And that has been negotiated with the union, I presume?

MR CORNISH: Certainly, the union has been involved in those discussions, yes.

567 MS THOMPSON: So, it comes down to the fact that work that is current being done by police officers will be done by civilians in future?

MR CORNISH: Not all, because you must understand that there are a number of systems outside the scope of the GRN that we still have to maintain, including high frequency SatNav channels and the 64 channel block which is a national designated band.

568 MS THOMPSON: Can I understand whether dispatch work will be done by civilians rather than police officers?

MR CORNISH: Not to my knowledge at this time. Dispatch work is being done by police officers. I think you should keep the dispatch concept away from the GRN. Although there are links there it is a completely different project.

569 MS THOMPSON: So, it is just the servicing of the equipment?

MR CORNISH: Yes.

570 THE PRESIDING MEMBER: Thank you, Mr Cornish and Mr Stradiotto. We appreciate the trouble you have taken to give us that information.

THE WITNESSES WITHDREW

ADDITIONAL WITNESSES:

GRAHAM FOREMAN, Chief Executive; PETER FOWLER, Executive Director; and ROD DOWLING, Engineering Manager—Wireless, all of Department of Administrative and Information Services, 25 Grenfell Street, Adelaide, South Australia 5000, called and examined:

571 THE PRESIDING MEMBER: Before I call the next witnesses I have to tell you that, because today is a sitting day and the collection of evidence in relation to the Government radio network is taking us longer than we anticipated, the taking of evidence on the Festival Centre upgrade will be deferred until next Wednesday. If any of you are waiting for that, I apologise for any inconvenience. It will not happen today; there simply is not the time. Mr Foreman, do you have any further information for us?

MR FOREMAN: We have provided significant information.

572 THE PRESIDING MEMBER: I know; I am asking whether you have any further information.

MR FOREMAN: We have nothing further today.

573 THE PRESIDING MEMBER: You were present at the time I read out the statement. You have appeared before the committee before.

MR FOREMAN: Yes.

574 THE PRESIDING MEMBER: What the committee must do is discover what has happened and by what process we arrived at the selection of Astro Smartzone. I need to know who selected the Astro Smartzone technology; the committee needs to know that. Do you know the answer to that, Mr Foreman?

MR FOREMAN: Yes, I believe I do. Following a lot of work and within Government in terms of looking at the requirements of agencies, independent technology experts, Amos, Aked and Swift did some work for the Government in April 1993, and we have provided their report to you. That report pointed to two technologies as meeting the requirements; that was Motorola Smartzone and Ericsson GE EDACS technology. A final decision was not taken at that stage. A request for preliminary proposals process was undertaken in 1994.

575 THE PRESIDING MEMBER: Who asked for that?

MR FOREMAN: The Government sought preliminary proposals from five technology service providers. They were Telecom, Optus, Vodaphone, Pacific Star and British Telecom.

576 THE PRESIDING MEMBER: And that was a resolution of Cabinet, was it?

MR FOREMAN: I cannot answer whether it was a resolution of Cabinet or of the Cabinet committee that was managing that.

577 THE PRESIDING MEMBER: But it was Ministers who made that decision?

MR FOREMAN: Correct.

578 THE PRESIDING MEMBER: Good. So, they were the other system providers but were other systems besides Astro Smartzone evaluated?

MR FOREMAN: They were.

579 THE PRESIDING MEMBER: One of them was the Ericsson outfit you just spoke of?

MR FOREMAN: Yes, I was coming to that. In relation to the request for preliminary proposals, two of the service providers put forward proposals. One of them put forward a proposal that involved the Motorola Smartzone technology and the other was Optus, which put forward a different technology. Our independent experts, Amos, Aked and Swift, looked at that and the alternative technology was not regarded as suitably meeting the Government's requirements.

580 THE PRESIDING MEMBER: That was an open inquiry, meaning that the marketplace was invited to offer its products?

MR FOREMAN: Correct.

581 THE PRESIDING MEMBER: And that decision was taken by some Ministers?

MR FOREMAN: Yes.

582 THE PRESIDING MEMBER: You do not know whether that was the Cabinet or a subcommittee of Cabinet?

MR FOREMAN: I do not know.

583 THE PRESIDING MEMBER: Do you know, Mr Dowling?

MR DOWLING: I believe it was the IT subcommittee of Cabinet.

584 THE PRESIDING MEMBER: And those Ministers were?

MR DOWLING: Olsen, Matthew and Brown.

MR FOREMAN: So, at that stage there was an evaluation of those two technologies, and the Motorola Smartzone was the only one of the two put forward that was regarded as meeting the requirements that had been specified by Government after looking at all the agencies' needs. A further bit of work was then done by Gibson Quai and Associates, and again we have given you the report. It looked at a whole range of different technologies, and that work pointed again to the Motorola Smartzone being the appropriate technology.

585 THE PRESIDING MEMBER: They were the people who evaluated the systems?

MR FOREMAN: That is right.

586 THE PRESIDING MEMBER: They were authorised to evaluate it by the Cabinet subcommittee and, if not, then by Cabinet itself.

MR FOREMAN: Certainly as part of the process of evaluation—

587 THE PRESIDING MEMBER: Not any Minister acting alone?

MR FOREMAN: I do not believe so.

588 THE PRESIDING MEMBER: And it was not any bureaucrat acting without authority?

MR FOREMAN: No.

589 THE PRESIDING MEMBER: It was properly documented and the process was at all times open and accountable?

MR FOREMAN: Correct—and you have a copy of their report in the papers we have given you.

590 THE PRESIDING MEMBER: Yes, we have, but they did not answer those explicit questions. I am asking you to make absolutely plain on the record that that was the way the process was structured—no question about it.

MR FOREMAN: That is right; and, besides pointing to the Motorola Smartzone technology, that report also pointed out that the earlier report that Amos, Aked and Swift had done which pointed to two technologies, the second being the Ericsson GE EDACS, pointed

out that the Ericsson GE EDACS technology would not meet the Government's requirements. So, at that stage the Motorola Smartzone technology was the technology preferred, following that series of reports; and a Cabinet decision was taken in April that year (1994) that selected that technology.

591 THE PRESIDING MEMBER: Where was that firm based?

MR FOREMAN: Gibson Quai? Perth.

MR FOWLER: The consultants have offices in Adelaide, Sydney and Perth.

592 THE PRESIDING MEMBER: Do you know who wrote the report, Mr Fowler? It is under the firm's name I know, but I am curious about the individual engineers who did the assessment.

MR FOWLER: It was one of the directors of the firm. It was either Dominic Quai or Kit Wignall, both of whom are directors of the firm.

593 THE PRESIDING MEMBER: They were selected by Cabinet; is that correct?

MR FOREMAN: That is right. Then there was the well documented process of Cabinet deciding to enter into a designated supplier agreement with Motorola, and that occurred in November 1996. There were other reports from independent experts, again, copies of which were had in that intervening period, which continued to confirm that Motorola Smartzone was the best technology to meet our requirements. More recently, in fact, in January this year, we had Gibson Quai review that position again to ensure that it was still the best and most suitable technology for our requirements, and they have given us a report that says that.

594 THE PRESIDING MEMBER: So, there are no other comparable technologies now available to meet the South Australian need?

MR FOREMAN: The advice we have is that the Motorola Smartzone technology is the most suitable technology if we are to go ahead with this project at this time.

MR FOWLER: Can I give a definitive answer to that?

595 THE PRESIDING MEMBER: Yes; please mark your spot there, Mr Foreman. Mr Fowler, if we were to wait, how long would we have to wait for an alternative technology that would deliver at least as good—indeed, better—for the same dollars? Is such a technology available in the market place, in your opinion?

MR FOWLER: I will answer who wrote the report first, because I have it open.

The report to which Mr Foreman referred was from Gibson Quai, dated 29 April 1996, and is signed by Kit Wignall, one of the directors of Gibson, Quai and Associates. In relation to the available technologies, a range of technologies are in existence or are coming into existence now, and Mr Dowling might be able to help us with some of them. There are about seven of them.

596 THE PRESIDING MEMBER: Would you hold it right there? Do you know what these technologies are, Mr Dowling?

MR DOWLING: Certainly. There is certainly Motorola Astro Smartzone, which is in a developing phase.

597 THE PRESIDING MEMBER: It is continuing to be developed?

MR DOWLING: It is continuing to be developed. There is APCO Project 25 which is a digital only technology and which is beginning to be released into the marketplace. There is also the TETRA standard, which is currently being developed and a number of contracts have been signed for TETRA systems around the world. There is also the TETRA pole, which has significant user bases around the world today. There is the Ericsson EDACS and the Aegis system and these are proposed for an international standard as well. There is the Motorola iDEN, which is the trademark of Motorola. That is being developed by the Japanese and Canadian Governments for use within their marketplaces.

598 THE PRESIDING MEMBER: When do you think that will go to the market?

MR DOWLING: iDEN has been available since about 1994 and has an extensive user base, particularly in Asia.

599 THE PRESIDING MEMBER: What is wrong with it for South Australia?

MR DOWLING: It is very much a high density technology.

600 THE PRESIDING MEMBER: I do not know what that means.

MR DOWLING: It tends to use smaller cells and it means you need more sites for a given geographic area.

601 THE PRESIDING MEMBER: Is it better for densely populated areas such as Hong Kong and Ottawa?

MR DOWLING: That is absolutely correct. It is one of the most efficient technologies in terms of the number of conversations you can have on a particular channel. It is more efficient than TETRA and the APCO Project 25. It does not have the products

available that suit the Australian environment and the Australian public safety environment.

602 THE PRESIDING MEMBER: Is that particularly for South Australia?

MR DOWLING: Absolutely. It does not have things like encryption, simplex or direct mode available. It specifically targets more of a commercial environment, more of an extremely high density environment which we just do not have here in Australia, let alone in South Australia.

603 THE PRESIDING MEMBER: Do you go home every night knowing that we have selected the best available technology to meet our needs?

MR DOWLING: Absolutely.

604 THE PRESIDING MEMBER: I am pleased to hear someone say that at last. That is a relief to me and I rely upon that evidence. It is something that the committee must be able to do one way or another from somewhere.

MR DOWLING: I am pleased to provide you with that. Further, I refer to the Cramond report, page 46, appendix F, document 12.

MR FOREMAN: I have covered the process. In summary, the selection was made by Cabinet with advice from specialist consultants on a number of occasions and following a request for proposal process. Criteria used at all stages has been based on the State Government's requirements following a comprehensive survey of all of our agencies' needs.

605 THE PRESIDING MEMBER: Mr Fowler, do you have any statement that would enable us to rest some of our anxieties?

MR FOWLER: I have some points of clarification. By way of background, I have worked in the telecommunications and radio communications industry for some 30 years. I hold technical qualifications from Sydney Technical College and Brisbane Technical College. I was employed in the New South Wales public sector for some 14 years when I had responsibility for radio communication networks for organisations such as the ambulance, the State Emergency Services and other agencies. I held a senior officer position with the New South Wales State Emergency Services as Divisional Controller.

606 THE PRESIDING MEMBER: Was that voluntary?

MR FOWLER: It was. I was involved in many operations as I was the Controller for the Northern Rivers area of New South Wales for some five years.

607 THE PRESIDING MEMBER: You worked in Motorola?

MR FOWLER: I did.

608 THE PRESIDING MEMBER: But you do not see and sincerely believe there is absolutely no conflict of interest between your having been employed by Motorola and working for the State Government advising on the use of Motorola?

MR FOWLER: Frankly, I believe the State Government does well from my experience working in Motorola. I would say about Motorola and the industry generally that it is not a large industry. If you look at other organisations like Plessey, Philips and so on, you will find officers there who used to work for Motorola in senior positions. In major paging companies you find people in senior positions in Hutchisons and Link. Motorola was a large employer in the radio and communications industry and many people are around who have worked for Motorola.

609 THE PRESIDING MEMBER: It is coincidental and not clandestine or sinister that you are now working for the State Government?

MR FOWLER: Yes. I chose to join the South Australian Public Service after my job with Motorola involved much travel in Asia over three years. I had the privilege of living in South Australia in 1990-91 and I have lived in many cities in Australia. As I found South Australia to be the most wonderful place, when I got the opportunity to get off aeroplanes it was worth the pay cut I took to join the South Australian Public Service. I have a definite love for the community here and what is going on here is very important to me. As for the New South Wales GRN for which I was the Project Director on behalf of Motorola, I have some little knowledge of what went on there and we were working at that time to a prime contractor. As Inspector Cornish alluded to, it was almost a pilot network and something the New South Wales Government chose to do was to invest a small amount and then go through a process of augmentation etc. My personal view is that that is not the way to go about implementing a whole of Government Radio Network because you end up with the situation, as the New South Wales Government ended up with, that some users who had poor communications were eminently satisfied but those with good communications did not want to join the network because it offered only what they already had.

610 THE PRESIDING MEMBER: They screwed up because they did not write a job specification to begin with?

MR FOWLER: They had a view that they would build a network and then augment it, but funding delays and so forth meant that some of the commitments made to users were not met because they did not get all the funding up front. That is important to understand.

611 THE PRESIDING MEMBER: They did not get enough eggs under the hens to

start with and so there were not enough chickens hatching?

MR FOWLER: Yes. They did not cover the proposition of how the agencies would be provided with the terminal equipment and, in fact, agencies were left to their own devices as to how they would fund the terminals to go onto the network. The New South Wales Government also left it up to the agencies to work out and, as I mentioned to Ms Stevens last time, to decide how they would run their transition to their new network. They did not give sufficient cognisance to the amount of effort that was required to do that.

612 THE PRESIDING MEMBER: They did not allocate enough for training?

MR FOWLER: That is right. The New South Wales Government took a very technical view of what they were doing. I can tell you that the network was installed on time, on budget and met the technical specifications. There is a big difference between meeting a technical specification and meeting the user needs of the people who are at the end of these radio networks and then ensure that these radio networks work properly. Because of the past experience I have had work not only in New South Wales but in Victoria on the World Trade Centre transition of the new network, on Parliament House, Canberra, and on radio networks all over the world. I hope I bring some of those lessons to this project, which is why we are saying that training is so important. The New South Wales network was technically sound but it did not meet the user requirements because the users were not, at the operational level, fully involved in defining some of those requirements up front.

613 MS STEVENS: Do you believe you have remedied that here, because some of the comments of user agencies seem to suggest that perhaps they have not been part of it?

MR FOWLER: We have several consultative forums in which we engage. There will be members of the public sector who were not involved in those forums and who will have their view. Some of those people will be personally impacted by the implementation of the GRN and may have to find different work or move to work with Telstra. There will be different views, but we believe we have gone a great distance in making sure that we understand and have met agency requirements. The GRN was developed in consultation with and accepted by the key operational personnel within agencies. Key operational personnel within agencies were involved with the evaluation of the bids that came in. Just recently we had gone most of the way to completing the negotiations for this contract. I gave a direction several weeks ago that I thought it was important that we went back to those who were involved in the evaluation and said, 'This is our score card and this is what you asked for in your RFP. This is what you evaluated and what was important and this is what we now plan to deliver via that contract.' There is no material area between the RFP and what we have negotiated in the contract that we have not succeeded in getting in terms of user requirements.

614 THE PRESIDING MEMBER: Going on with the earlier analogy, the chook shed is built on sound ground and of sound materials and is of sound purpose. There are

enough eggs for chickens to come along. This network has been properly conceived and positioned and appropriate planning has been undertaken to cover the needs of training for future operators and the critical path to be followed for the purchase and installation of the hardware equipment will be integrated into the range of training that has to be undertaken by people the various agencies have to use it. Are you well satisfied that is already part of the overall concept?

MR FOWLER: Yes. As a professional in this industry, it is a massive project and my professional integrity is involved with it.

615 THE PRESIDING MEMBER: They are two very valid observations.

MR FOWLER: I would not be party to anything that impinged on my professional integrity, which I hold so strongly. I wish to take you back to the comments about the New South Wales Bushfire Brigade. I visited New South Wales several times last year as I have regularly visited other States. I visited Victoria a couple of weeks ago and met with senior officers from the New South Wales Bushfire Brigade, the ambulance and the Metropolitan Fire Services in Sydney. I did not touch on the police because currently the New South Wales Police are not users of the New South Wales GRN, although I understand that they are keen to become users of the New South Wales GRN when the augmentation and enhancements are completed. There is a distinct difference between the New South Wales public sector deciding to use the GRN for bushfire fighting activities, as opposed to the South Australian Country Fire Service plans to use the GRN.

I have a great deal of empathy for the position of the New South Wales bushfire service and I believe that its view is probably correct when it says that the GRN as a network, a solely network dependent communication tool, does not meet its needs. That is not the situation we contemplate here in South Australia. In South Australia, we contemplate that the CFS will use network independent communication at the fire line, network independent communication to the tanker or the fire appliance, and a combination of network independent and network dependent communication between the fire appliance and the brigade headquarters. In addition to that, I understand that it is the Country Fire Service's position to provide to the firefighters at the fire line network dependent communication, as well. They currently have network independent communication and they will retain that in the future. They will get the added advantage of network dependent communication.

616 THE PRESIDING MEMBER: The independent stuff is the local chatter that goes on to make sure that they are getting the job done on the site and it is irrelevant to anyone outside it. They need to be able to talk to each other.

MR FOWLER: The network arrangement will give them several advantages. They might be 20 metres out of range from point to point but they might be in range of a repeater, and being in range of a repeater could save firefighters' lives. If they choose, they

will have access to the emergency call features of the network, where they can push a button and send a signal and say, 'Help, I am in real trouble.' The South Australian plan for the fire service is different from the way the New South Wales bushfire service, as a matter of public sector policy, is implemented.

617 THE PRESIDING MEMBER: Are you saying that you are making better use of the technical features from this system than New South Wales has sought to do?

MR FOWLER: That is correct. I will now comment on the Victorian whole of Government network. It is an MPT system. It is fair to say that MPT had a rightful place in the technology time line, but perhaps that time line has passed it by.

618 THE PRESIDING MEMBER: When did they put that in?

MR FOWLER: In the early 1990s, as I recall.

619 THE PRESIDING MEMBER: It is obsolete now, so these things have a technical life of about seven or eight years?

MR FOWLER: I suggest it will be longer than seven or eight years.

620 MS STEVENS: How long?

MR FOWLER: That is really a crystal ball question but, given that we have the opportunity, it is proposed that we have analog and digital capability. We could move to a full digital capability should we choose, and that would be relatively easy to achieve. At greater difficulty, we could move to an APCO Project 25 solution. My reasonable estimate, and I think that Mr Stradiotto commented on this, is that we have to consider the network in its components. As for the voice network, I would expect that it would have a life something greater than 12 years. Between 10 and 13 years would be about the lifetime of the system.

621 THE PRESIDING MEMBER: Can it migrate from where it is now to what looks like becoming available in the near future without its needing to be entirely scrapped and replaced?

MR FOWLER: One of the attractions of this is that it is both analog and digital. Analog means that we can buy terminals today at a lower price than we can buy digital terminals. Aside from law enforcement agencies, most agencies' needs are satisfied by analog technology. When I say 'law enforcement', I am not talking just about the police, but fisheries and crisis care workers, among others, who have a great need for secure communication because their lives can depend on not being compromised. Most other agencies' needs are met by analog technology. They still get the benefits of emergency call, caller ID, short messaging—all those features are still there in the analog mode. If somewhere down the track

it is decided that digital is so good that we do not want to have anything more to do with analog, the network could be upgraded to that. We have an opportunity to move forward with technology. That would be based on a business decision at the time.

622 THE PRESIDING MEMBER: Do we have a technological platform that is flexible and capable of development in the longer term?

MR FOWLER: Yes. That is the voice network. The backbone that ties all this together is the microwave network, and it probably has a life of something greater than 15 years. Then there is the paging network. The paging network that has been selected by Telstra is the most modern in the world. It has just been implemented in New Zealand and the New Zealand fire service is using it. It is used by agencies in Asia. Right now, it is implementable and stable, but we are at the beginning of it, so we are probably looking at a 15 year time line.

We also have the high speed mobile data network, which is probably the most difficult area of all the technology. We are basically talking about mobile computing and computing generally, and who can predict that? We have assurances that the technology is not going to be replaced the week we install it, but we do not have assurances that in 10 years time it will still be the best technology, and I would not like to give the committee those assurances. It is much like the home PC. Technology advances so quickly. People can choose to have a 486 because they do not need to have a Pentium. It comes down to a business case to do an upgrade.

What I can say about the mobile data network is that it will make a tremendous difference to the law enforcement and emergency services agencies over what they have now. We are talking about 19.2 technology as compared to effective data transfer rates at about 2.4. The Victorian network, which is an MPT network, does not meet emergency services needs. It is a pseudo phone system. We will be able to connect the Country Fire Service of South Australia to the Country Fire Authority of Victoria at the network level should the two Governments decide to do that. That is technically feasible but we would have to ask ourselves whether we would want to do that, given that there are a longer call set up times, etc. We would only use it for the command network.

The GRN proposes to give coverage into Victoria from the South-East and up along to Broken Hill, so there will be coverage into Victoria. Fire trucks from South Australia can venture about 20 kilometres into Victoria and still be in the South Australian radio network range.

623 THE PRESIDING MEMBER: In making that explanation, are you saying to the committee that there is a kind of signal transformer that will take the signals from the fire trucks that are in the Victorian CFA and, through that transformer, make it possible for South Australian trucks working with them at the front to talk to each other, or is there some other

way in which they will be able to communicate? In the last five weeks or so it has caused a lot of anxiety in my electorate and in Mr Williams' electorate and, now, people in Mr McEwen's electorate of Gordon are equally anxious about the interface between the two.

MR FOWLER: It is possible and practical to connect a Smartzone network to an MPT network. It can be done. At the operational level, I would suggest, drawing on my emergency services experience here rather than my technical expertise, given the call up times with MPT, if I was a firefighter, I would be operating in direct mode with my South Australian radio rather than working with the Victorian MPT system.

624 THE PRESIDING MEMBER: Notwithstanding the fact that South Australian CFS volunteers will be able to feel more comfortable, will they be able to talk to the Victorian blokes who are working with them?

MR FOWLER: Yes.

THE PRESIDING MEMBER: That is what we needed to know.

MR FOWLER: Subject to the two Governments agreeing that the network will talk.

625 THE PRESIDING MEMBER: Politicians will burn if they let fires burn.

626 MS STEVENS: It will be even worse if they let firefighters burn.

627 THE PRESIDING MEMBER: Yes. There is no cause for us to be apprehensive or anxious? There is not a rail gauge problem?

MR FOWLER: No, subject to Governments agreeing. Common sense tells me that, if you are talking about the safety of people, common sense will prevail. Perhaps I am wrong in that wish, but it is technically possible and practical to do that.

628 MR SCALZI: I want to get this in chronological order. You stated that in April 1993 an independent body came up with two systems, the Astro Smartzone and Ericsson?

MR FOREMAN: That was April 1993.

629 MR SCALZI: In 1994 another independent body looked at the requirements for South Australia and it came up with Astro Smartzone?

MR FOREMAN: In January 1994.

630 MR SCALZI: Since then there have been several independent assessments, as late as this year, and they have come up with Astro Smartzone?

MR FOREMAN: That is right.

631 MR SCALZI: There have not been comparable systems to do the job for South Australia?

MR FOREMAN: That is what our advice tells us.

MR FOWLER: The critical point is the concept of being able to mix analog and digital. The APCO Project 25 is a pure digital solution and people will say that the terminals will be cheaper, but there is no evidence of that. There are other technologies that are pure digital, again where the assertion is made that the terminal products will be cheaper. The point is that those terminal products are not type-approved in Australia. We have made inquiries with the Australian Communications Authority, and it has advised us that no terminal has been approved for use on any of the other digital technologies such as TETRA with the GRN. It also informed us that it has not made any frequency allocations for the TETRA solution. These are the obstacles. I do not want to set us off down a trail of thinking that if we do not do this for two or three years there may be another option.

632 THE PRESIDING MEMBER: That is not an option because we have what we need and we can migrate across the field as time goes by?

MR FOWLER: Yes.

633 THE PRESIDING MEMBER: We are reassured by the expert opinions of witnesses such as yourself on that basis.

634 MR SCALZI: We are not comparing apples with apples when we compare the GRN of New South Wales and South Australia. You stated that it was just over 20 million and it was a pilot that would have to build-up.

MR FOWLER: The New South Wales Government might not have characterised it as a pilot. I mean, at the time that was done—I think that was in 1992 or something like that—this was pretty revolutionary stuff and it was one of the earliest ones of that size installed in the world at that time. I can tell you that it was quite painful being the project director of leading edge technology. However, it was a small network and in relation to its technical requirements, for instance, the coverage requirement was 90-90, our coverage requirement is 95-95. So it is different.

635 MR SCALZI: It would be unfair to compare a system worth just over 20 million to our system.

636 THE PRESIDING MEMBER: It is unnecessary. They are only doing a little bit of what we are setting out to do. They have not bought the whole baggage of tools and they have not trained the people. It is not our problem, it is theirs.

MR FOWLER: I am not critical of how the New South Wales folk tried to do it.

637 THE PRESIDING MEMBER: Leave it to them to work it out.

638 MS THOMPSON: Some questions have been raised about repair and maintenance under the contract with Motorola and whether they will be conducted in Australia or whether they will be sent overseas. What is the current situation?

MR FOWLER: In the designated supplier agreement that the State signed with Motorola, I believe in November 1996, there was a requirement placed on Motorola in relation to terminal products that said that it must repair terminal products in South Australia, it must not send parts of terminal products or the terminal product as a whole out of South Australia for repair, and Motorola is contractually obliged to do that.

639 MS STEVENS: By when?

640 THE PRESIDING MEMBER: From the outset?

MR FOWLER: During the currency of the GRN.

641 MS STEVENS: It has to do that as soon as it is signed up and ready to go?

MR FOWLER: Yes; that is correct.

642 MS THOMPSON: When was that agreement signed?

MR FOWLER: November 1996, I believe.

643 MS THOMPSON: The Cabinet document from November 1996 signed by Dean Brown refers to the possibility of the need for equipment to be sent interstate and overseas for maintenance and repair. That was signed on 4 November.

MR FOWLER: You might be talking about the infrastructure products.

644 THE PRESIDING MEMBER: What does that mean, aerials and stuff?

MR FOWLER: If I can divide it into two components. There is absolutely no doubt that Motorola is contractually obliged to service the mobiles, the handsets and so forth

in South Australia. That is an issue between the State and Motorola. We have set service levels between the State and the proposed service provider (to which I think someone else has alluded) of 99.995 per cent availability. That compels the service provider to provide the services to those pieces of equipment in South Australia. They will do that, at times, by replacing computer cards, and this is quite common in industry. Some of those cards—not only for the Motorola equipment but I would suggest for the Nokia equipment and so on—ultimately will end up somewhere overseas in a global repair centre for repair. That will not impact the availability of the network because the service provider will be required to take out the card and put the new card in.

645 MS THOMPSON: Are you talking about the terminal products?

MR FOWLER: No, they are the network products.

646 MS THOMPSON: Is that infrastructure products?

MR FOWLER: In relation to the terminal products, definitely Motorola has a contractual obligation upon it to service those in South Australia.

647 MS THOMPSON: Is it optional for agencies to join the network?

MR FOREMAN: The answer is basically, 'No, it is not optional,' but a mandate has not been issued. All agencies are and have been cooperating and understand that they will get a better service if they participate. It is proposed that there will be a steering committee to look at issues of that kind. If an agency has a particular requirement that it believes falls outside what is provided in the network, then the network has the ability to look at those situations. This is a whole of Government network, so all agencies of Government will be participating.

648 MS STEVENS: If it was determined that one agency would fall outside the network, who would pay for that?

MR FOREMAN: The agency would pay for that.

649 MS STEVENS: In other words, if they did not go in with the large contract, certainly there would be some cost penalty and they would have to find the alternative.

MR FOREMAN: Presumably that is a business decision for that agency and presumably they would be providing that service now.

650 MS STEVENS: In answer to my question you mean, 'Yes,' they would have to find the funds themselves?

MR FOREMAN: Yes. The Government Radio Network contract and project will fund the whole of Government Radio Network: it will not be funding other networks.

651 THE PRESIDING MEMBER: If they decide not to participate, it is on their head.

MR FOREMAN: Correct.

652 MS THOMPSON: Will you define for us what cost neutrality means in relation to the agencies?

MR FOREMAN: I believe the word that has been used is 'budget' neutrality and my understanding of what that means is that agencies will not have to find extra money in their budget to participate in the Government Radio Network as distinct from operating their own networks, which they have done to date.

653 THE PRESIDING MEMBER: To the extent that they get exactly the same level of service as they have at the present time and what they will have under the Government Radio Network?

MR FOREMAN: No, they will get considerably extended service. There will be a whole range of services.

654 THE PRESIDING MEMBER: For the same money?

MR FOREMAN: Basically.

655 THE PRESIDING MEMBER: When does the extra start? Do they have to pay any more for any additional?

MR FOREMAN: The only situation in which agencies may have to pay more or do more is if they decide that they want to operate differently, and therefore want to do different things. However, the Government Radio Network will be providing a higher level service to the agencies.

656 THE PRESIDING MEMBER: I was going to ask those questions of Mr Ullianich, and I guess I might need to do that, but I am grateful to you for having provided the committee with your understanding of it and I guess it has already been discussed then between your agency and Treasury?

MR FOREMAN: Certainly.

657 MR SCALZI: You said that the three systems have a lifespan of 10 to 15 years.

At present the various agencies have maintenance costs and Mr Foreman has given us an understanding of the implementation and where cost neutrality comes in. Do you envisage that, once the system is established, the maintenance cost for the agencies will be more or less than the maintenance costs for the present system?

MR FOWLER: Logic tells me that, if you have 17 existing networks—

658 THE PRESIDING MEMBER: It will vary according to the age of the existing equipment, and so on.

MR FOWLER: That is right. You have the age of the equipment—and I think we provided the committee with some photographs of some sites at Myponga. From that you can see that there is a lot of duplication. For example, you could have a technician from the Police, a technician from the ambulance service and so forth at the site. So, you remove a lot of that duplication. The other thing though, in answering that question, is that the requirements that the agencies have put in terms of service delivery are quite significant. I would say that there would be few agencies currently that get that level of availability: they could not. There would only be a few agencies that would have routine maintenance on their systems. These things are provided for in the contract and are required, in my view, to properly operate a radio network suitable for the protection of people's lives and properties. So, I believe that it will not cost us any more for like for like again. However, if you are asking whether it would cost us more, I think that it may cost us more, but we are seeing situations now with the maintenance of networks that are really quite disturbing. If you do not maintain your antennas or your batteries and if you do not do all of the things recommended in good communications systems maintenance procedures, you are putting people's lives at risk.

659 MR SCALZI: Are you saying that the maintenance standard will be at a much greater level once it is installed than what is at the present?

MR FOWLER: This is stated as a requirement of the users.

660 MR SCALZI: But given the fixed overall costs, the per unit should come down?

MR FOWLER: Yes.

661 MR SCALZI: And a higher standard?

MR FOWLER: That is right.

662 THE PRESIDING MEMBER: Thank you gentlemen, I appreciate the time and the information you have been able to provide to the committee.

ADDITIONAL WITNESS:

JOE ULLIANICH, Department of Treasury and Finance, State Administration Centre, 200 Victoria Square, Adelaide 5000, called and examined:

663 THE PRESIDING MEMBER: If you need to call on any other witnesses at any time, do not hesitate to do so. I remind you that, if you wish to give information off the record, then make that point. If it has to be *in camera* say so at the time also so that we can wait until the conclusion to do so. However, remember that it is the committee's decision whether or not something is confidential. I remind you that your purpose is to enable the committee, as an organ of the Parliament, to report through the Parliament to the public that the public interest is served.

MR ULLIANICH: Yes.

664 THE PRESIDING MEMBER: Do you have anything you want to say or are you happy to simply answer the questions that we may have?

MR ULLIANICH: I have no specific statement. I am here to answer questions.

665 THE PRESIDING MEMBER: At the time when the initial costings were released for the GRN project, what items were included in those costings?

MR ULLIANICH: I will answer that question perhaps in a slightly longer fashion. Treasury and Finance became deeply involved with the process in about late 1997.

666 THE PRESIDING MEMBER: In the past few months, for example, in the past 12 months, the bottom line figure of the cost of the GRNC has changed several times. What we want to know is why; what items were included in the first instance; and what has happened since?

MR ULLIANICH: Yes, the numbers have changed. As I said, we became involved in late 1997. At that stage, two bids were being evaluated and the purpose of Treasury being involved at that stage, certainly from my part, was to ensure as far as possible that the evaluation of the bids was properly conducted and that, ultimately, Cabinet would be provided with the most accurate financial information possible. So that was the purpose of our involvement.

667 THE PRESIDING MEMBER: It would be a good idea if Ministers simply shut up until they knew what they were talking about instead of putting figures on things, because all it does is create public anxiety. Am I fair in making that observation?

MR ULLIANICH: That is your observation. I do not think it is appropriate for me to comment.

668 THE PRESIDING MEMBER: I do not mind if you do not comment. It has happened on a number of projects where Ministers and/or their spin doctors and media minders have come out with statements and put figures on projects that have then altered and it has caused public anxiety and it wastes this committee's time because people write in wanting to know what is going on. For the public record I say to you, and to anyone else who may choose to read these remarks at some later time, that is simply stupid politics and it does not do anything for the credibility of members of Parliament or Parliament itself for that to be going on. I do not expect you to respond to that at all, but what we do need to know is how come we started off with figures which were very much lower and very much different from what they are now?

MR ULLIANICH: It is my understanding that a figure of 67 million has been mentioned quite extensively in Parliament and I think also reported in the press.

669 THE PRESIDING MEMBER: Two hundred and sixty-seven.

MR ULLIANICH: I am talking about the difference between what initially went to Cabinet and ultimately what Cabinet recently approved.

670 THE PRESIDING MEMBER: The difference.

MR ULLIANICH: That is right. Essentially—and obviously I am not capable of getting into the technical aspects of it; and the committee has heard a lot of evidence of that—it is my understanding from my involvement and the review of the financials of the project that one large cause of the increase in price was the effect of currency movements that occurred in the course of last year. In that regard, there are Treasury instructions that require us to take out an appropriate currency hedge when a currency exposure is created. That issue was considered at some length in the course of last year. However, because Cabinet has not made a final decision on proceeding with the project, it was felt that it was inappropriate to take out the currency hedge, because at that point and until we had certainty about the contract proceeding it was regarded as inappropriate.

671 THE PRESIDING MEMBER: Have we hedged it now?

MR ULLIANICH: It is hedged now. Once Cabinet made the decision, and the hedge was taken out. I might say, in addition to that, as a consequence of not only this issue but also several where there is an ambiguity in terms of the Treasurer's instruction and when precisely a hedge should be taken, the Treasurer's instructions are in the course of being amended so that, even in the event that Cabinet has not made a final decision, that process that we embark on now is with the Treasurer's approval. In other words, it is not up to a CEO to make that decision off his own bat. When it becomes very likely that the Government will agree to something, a submission will be put to the Treasurer, and he will authorise or not

authorise the undertaking of the currency hedge. Notwithstanding that, a contract is not in place.

672 THE PRESIDING MEMBER: You are saying that the \$67.7 million is in the main attributable to the variation in the exchange rate.

MR ULLIANICH: Not in the main, no.

673 THE PRESIDING MEMBER: What other items are a component of that?

MR ULLIANICH: It is in the order of \$15 million.

674 THE PRESIDING MEMBER: That is about 21 per cent?

MR ULLIANICH: Yes. In addition to that, there is a contingency that Treasury and DAIS came to a view that that was an appropriate number to put in there. Given the technology we were dealing with and the uncertainties that we found as the project was developing and evolving in that \$247 million figure, there is a contingency of some \$23 million.

675 THE PRESIDING MEMBER: Is that the contingency factor?

MR ULLIANICH: Yes.

676 THE PRESIDING MEMBER: That is about 9 per cent?

MR ULLIANICH: Roughly, yes.

677 THE PRESIDING MEMBER: What about the rest of it?

MR ULLIANICH: My colleagues gave an explanation to the committee earlier about the costing of the various components.

678 THE PRESIDING MEMBER: It is not just a question of having overlooked training components, and so on, and including them?

MR ULLIANICH: No. Going back to the first Cabinet submission which determined the bidder the Government was going to proceed with as the preferred bidder, one thing that has not been focused on is the fact that at that point Cabinet was predominantly selecting a bidder from the process that had been embarked on. In other words, there were two contenders, and Cabinet was presented with the final consequences of either contender, and it was recognised at the time that other additional costs could not be fully identified at that point.

Again, once the project evolved and matured, a better understanding of those costs—for example, training and decommissioning costs of existing equipment, and migration to the new technology—were not bedded down. However, Cabinet was capable of making the choice between the two bidders.

679 THE PRESIDING MEMBER: What items have expanded over and above the contingency sum and the currency exchange rate consequence? What other items were under assessed in some significant manner?

MR ULLIANICH: I am not in a position to give you that information.

680 THE PRESIDING MEMBER: Why not?

MR ULLIANICH: I do not have it.

681 THE PRESIDING MEMBER: Who does?

MR ULLIANICH: As I understand it, again my colleagues in DAIS have that price differential.

682 THE PRESIDING MEMBER: The public disquiet about what has gone on means that this committee cannot express an opinion about it until it knows what the original proposition was and until we see some aggregated itemised form that gave us the sum of about \$180 million and what additional items have contributed in a significant way to the increase that now makes it \$247.7 million. If you do not have that information, then we need it fairly quickly so that we can begin to prepare our report on the proposition. It is quite a significant change.

MR ULLIANICH: I understand your point, and I am aware that it is quite capable of reconciliation. However, I just do not have that information before me. I can say in a general sense that, once Cabinet made a decision on the bidder, there was not a major rethink and a major outcome into the equation that had not been considered. It was more taking aside the \$22 million or \$23 million contingency and the \$15 million currency movement. The rest was one of realising the additional issues involved.

683 THE PRESIDING MEMBER: We have to account for another \$30 million. In simple terms, that is what we need to know. I would have thought you would rattle it off on the big ticket items involved.

MR ULLIANICH: Several items are involved.

684 THE PRESIDING MEMBER: Do you mean it is incorrect across the board?

MR ULLIANICH: No, to the best of my knowledge the actual contract involving Telstra did not move that much at all. It involved other aspects.

685 THE PRESIDING MEMBER: Where did the changes occur that account for the additional \$30 million? We have a discrepancy of \$67.7 million, and we accounted for \$23.3 million.

MR FOWLER: We have to distinguish between the contract costs and the total project cost.

686 THE PRESIDING MEMBER: Thank you for that explanation. So these are costs that are involved in the project but are not necessarily part of the contract?

MR FOWLER: It is very important that, when you embark on something like this, you do not just consider what is involved with the contract, because that is not a true representation of what the project cost was. What was put to Cabinet was the evaluation of the two bids. It is bidder A and bidder B. In that documentation, they talked of contract costs. It was a focus on the contract costs that showed that other costs within Government would be involved in the implementation of the project. So, the project costs consist of the contract cost and the costs that go on within Government.

687 THE PRESIDING MEMBER: Will you be able to provide the committee with a list that will enable us to understand how those extra costs in the project, over and above the contracted costs, are accounted for, and what they consist of?

MR FOWLER: If I could perhaps feed that back, I do not believe these were unforeseen costs in any way.

688 THE PRESIDING MEMBER: Good. Because we were confused.

MR FOWLER: I am not saying that you were confused; perhaps we did not do a good enough job of communicating. The cost of the contract was to design and construct over the seven years, which was \$161 million, was within the range that we predicted. We said it would be between \$150 million and \$200 million. That includes \$109 million for the design and construction of the three networks, and the integration of the three networks, and \$51 million over seven years for the operation and maintenance of the networks. It is important that, after the seven years, we get the networks back operating to the same standard as they were on the day we took them over. We can liken it to a fleet for lease.

689 THE PRESIDING MEMBER: Sort of a build own operate transport deal?

MR FOWLER: We will own it.

690 THE PRESIDING MEMBER: At the end of seven years?

MR FOWLER: From day one. We are contracting Telstra to maintain it and operate it on our behalf. That will involve \$51 million over seven years. That means that the total contract is \$170 million, and that gives us the radio communications equipment, the network infrastructure and the maintenance of it for seven years. We then have to take into account the terminal equipment that agencies will need to operate properly with the network, and that is \$39 million over the seven years of the contract.

691 THE PRESIDING MEMBER: Are we looking for another \$40 million?

MR FOWLER: We have other costs; for example, there are rentals, and so on, to be paid. There are terminal equipment repairs, and these repairs are going on today. These are not new costs. It is happening now. There is the installation of the terminal equipment, and part of that is an incremental cost. However, the bulk of it is an ongoing cost that agencies are incurring now. Public sector agencies change over their cars every two years. It costs money to pull out the old radio and put in the new one, and we have included those costs. There is the issue of training, and there are two components to training. What we have included in our training costs are indirect training needs of agencies to move onto the new network. Agencies have in place training: now when a new policeman or fire officer starts, they are subject to training.

692 THE PRESIDING MEMBER: Do you have the numbers available?

MR FOWLER: They add up to \$26 million over seven years.

693 THE PRESIDING MEMBER: We are looking for another \$14 million?

MR FOWLER: Then you have the \$22 million over seven years for the contingency, which is 10 per cent.

694 THE PRESIDING MEMBER: What did that come in at?

MR FOWLER: I can provide a sheet with that information on it if that is helpful to the committee.

695 THE PRESIDING MEMBER: We will need that fairly quickly.

MR FOWLER: The contract is one thing, but the committee must understand that the total project cost is yet another. There was a lot of focus on the value of the contract

with Telstra, particularly from the public domain, and the total value of the project was perhaps less in the public demand, but it certainly was not something that the project team was thinking of.

696 THE PRESIDING MEMBER: You have walked us through all that. How is it proposed that volunteer agencies will meet the capital costs required and be part of GRN?

MR FOWLER: We are talking about terminals, I presume—mobiles and portables?

697 THE PRESIDING MEMBER: I guess whatever you use when you are with the SES or the coastguards and so on.

MR FOWLER: I think the coastguards are different. I know that organisation has indicated that it wishes to join. In the context of like for like, if you have a portable radio today and a portable radio is to be provided tomorrow to work on the GRN, the cost of that is included in the \$39 million for terminals.

698 THE PRESIDING MEMBER: So, that will be met from the consolidated revenue source?

MR FOWLER: On that revenue source.

699 THE PRESIDING MEMBER: You will not have more lamington days and raffles and so on?

MR FOWLER: Joe's team is looking after the financing arrangements.

MR ULLIANICH: I will reiterate that point, which has been raised several times this morning. The funding philosophy that was agreed with Treasury and Cabinet in the ultimate decisions that were being made is that agencies would be left in a budget neutral position to an agreed base case. I think all here would agree that you needed to establish that sort of framework because if it was open slather everyone would have a radio.

700 THE PRESIDING MEMBER: You used the word 'agencies' and we took that to mean the Government agencies that are staffed with Government employees.

MR FOWLER: Yes.

701 THE PRESIDING MEMBER: So, on behalf of the volunteer agencies around the State, how will they meet it? You are telling me now that they are no different from the Government agencies in the capital items they need, such as mobile phones and boxes that

contain the electrodes or whatever it is.

MR ULLIANICH: You would have to look at the funding arrangements for each one of those agencies as to whether or not they are receiving any Government funds but, generally, to the extent that they have a bit of equipment now that is a radio and would be replaced by a similar bit of equipment that is compliant with the GRN, that is being funded.

702 THE PRESIDING MEMBER: These questions are not trick questions; do not misunderstand me. We are simply trying to allay the public's fears.

MR ULLIANICH: I understand, Sir.

703 THE PRESIDING MEMBER: What provision is there for training operators within the Public Service agencies as well as training the instructors for the volunteer agencies to use the equipment where it will change from what it is now in the way in which it must be operated? I do not mind the Government or public servants. The rest of us have to do things in our own time and I do not mind if they do too, but I want to know how we will meet the costs and what they are likely to be.

MR FOWLER: The training issue is very critical for this.

704 THE PRESIDING MEMBER: Yes, it is; that is why we are asking the questions, Mr Fowler.

MR FOWLER: I would hope that the steering committee will direct me that agencies are not permitted to move onto the network until there has been competency based train-the-trainer training provided by DAIS as part of the GRN funding. You then move down into the agencies. I would say that, when a new volunteer joins the CFS, part of their normal training is that they are taught how to use the radio.

705 THE PRESIDING MEMBER: Exactly; they volunteer to do that. These will be new radios so it will not matter; they will learn how to use them and will not have to learn how to use the stuff they are not using. The stuff that is obsolete will be gone?

MR FOWLER: We will train the trainer.

706 THE PRESIDING MEMBER: That is good, because that relieves some anxiety in the volunteer context. Those operators of the equipment in Public Service agencies will be required to undertake training?

MR FOWLER: As they are required to undertake training generally.

707 THE PRESIDING MEMBER: And they will not be allowed to be let loose on the stuff?

MR FOWLER: I would hope that it is a direction of the steering committee that agencies not be able to begin to use the network until they have undertaken the training. We are also hopeful that it will make this training competency based so it has some real credibility for those undertaking the training.

708 THE PRESIDING MEMBER: We do not want to see a repeat of a case of which you may not be aware, namely, the Crouzet ticketing system, where neither the public knew how to use that system on our public transport and nor did the staff—the driver operators on the public transport—where they had to try to allay the fears of the public and get them to use it properly. It caused a great deal of unnecessary angst. You only have to read the *Hansard* record of the time, which was before a Liberal Government was elected, to see that a great deal was made of it during Question Time and grievance debates. It was quite a waste of time; it was a red herring altogether, as it turned out. So, the members of the committee must be assured that there is a measure of training that does not result in some people in agencies claiming that the system does not work. Indeed, they may be accurately describing it in the general context but for no other reason than that they do not know how to use it, and that would be a disaster. It would be a public relations disaster for the public's trust in the Government's ability to deliver what it was put there to deliver.

MR FOWLER: As I say, I hope the steering committee will direct that agencies will not be able to move to the network prior to completing the trainer training. One of the success measures that we will institute for the network is that it really does not work and is not successful unless when the person pushes the button it actually happens for them. That is the real measure of success. You can have the most technologically superior network but if at the time the person uses it it does not get the result they expect you have not successfully delivered it.

709 THE PRESIDING MEMBER: I turn now to fees. Mr Ullianich, will there be an access or usage fee for the Government Radio Network?

MR ULLIANICH: At this stage it is not contemplated. My understanding is that the GRN does have a capacity to actually charge for air time, but that is not in contemplation.

710 THE PRESIDING MEMBER: You will not charge the coastguard in due time?

MR ULLIANICH: To my knowledge, no, Sir.

711 THE PRESIDING MEMBER: A number of organisations at present are keen to participate, for obvious reasons. They are very important organisations in the public mind. In

the main they are staffed by volunteers and, if they cannot participate, it is not just a matter of how they feel about being let down: more importantly, the public interest is not being served if they cannot be integrated into the communications arrangements that are involved in discharging the work they set out to do in protecting the public—which is in the public interest. So, again, they want to know whether or not they will have to schedule a whole lot more lamington days and cat shows and so on to raise the money to pay a fee to Government.

MR ULLIANICH: I understand the question, Sir. To my knowledge there is no access fee *per se*. In terms of the cost of the equipment they may need to acquire, I think it is a case of looking at each individual organisation and its funding arrangements. Ultimately these things become decisions for Government to make as to the funding that will be made available.

712 THE PRESIDING MEMBER: Can you give us from Treasury (you will not have done so but we want you to get it for us) a list of the broad categories of hardware that each and every agency will require, the software that will go on them and the training costs that they are likely to be confronted with in the preparation of their budget? Can you do that?

MR ULLIANICH: All that information is available, but certainly not within Treasury. The actual usage of the equipment and the type of equipment I understand is all within the knowledge of DAIS.

713 THE PRESIDING MEMBER: I do not want that information to disclose anything that would put the security of the police services' facilities at risk at all. What the committee is looking for is to find out within a comparable context, for instance, how much this bridge will cost in the section of road that is to be built; what provision is being made for the installation of the underground wires at the side of the road for the lighting at the intersection; and how much the pedestrian overpass will be, etc. Do you follow? From the Public Works Committee's point of view this is the kind of broad detail that we expect from other construction and installation projects, and I think it is quite proper in this instance that agencies provide that. If they have not thought about it and discussed it with Treasury now is as good a time as any to do it, because it will protect the Parliament and the Government of the day from being criticised for not having foreseen what those costs will be. If people start to write them down and provide them now, any substantial change to that in percentage terms can be identified and reasons given for the need for such a change, rather than waste the time of the Parliament arguing about whether Ministers are competent and so on. We just do not want that; the committee's job is to make sure that the agencies, including the Treasury, know where the money will go. Is that not right?

714 MS STEVENS: Yes.

715 THE PRESIDING MEMBER: You can do that for us

MR ULLIANICH: I understand that information has already been gathered by DAIS.

716 THE PRESIDING MEMBER: You can do that, Mr Foreman?

MR FOREMAN: To a large extent.

717 THE PRESIDING MEMBER: I do not want to know how many boxes of matches everyone has or what brand, just the broad categories.

MR FOREMAN: Yes.

718 THE PRESIDING MEMBER: Thank you.

719 MS STEVENS: Mr Ullianich, I want to return to the whole issue of where the money is coming from, essentially, because that is the issue that has come through consistently with every submission we have received. The Premier has told us as recently as yesterday in the Parliament that the GRN network is fully paid for and budgeted for.

MR ULLIANICH: Yes.

720 MS STEVENS: I and others have examined Budget Paper 2 and the Estimates volumes and we cannot find any financial lines or numbers detailing expenditure appropriated in the budget for the GRN. Yet, as I have just said, all the agencies have told us that this very expensive GRN system will be cost neutral to them. I have brought the books with me, and I would like you to show me the lines in here (because obviously we cannot find them) covering the expenditure on the GRN. Simply, where is it budgeted for in the budget papers?

MR ULLIANICH: Yes, I have brought the relevant books with me, as well.

721 MS STEVENS: Will you give the page and line numbers, please?

MR ULLIANICH: You will not find a specific number, because at that time the Government was negotiating with bidders and you could put a number. Certainly, to my recollection there are several references in the budget papers. *Budget at a Glance* on page 13 refers to provision for a Government Radio Network and computer aided dispatch system that will be of significant benefit to the emergency services areas. This is under the heading of New Fixed Asset Expenditure.

722 MS STEVENS: How much?

MR ULLIANICH: I said that no amount was attributed to it, because at that point negotiations were proceeding with the bidders and you could not put a number down in budget papers. Interposed in all that, internally there are forward estimates and at that time forward estimates were in place with regard to expenditure to be incurred in the GRNC.

723 MS STEVENS: Can you give us the details of those forward expenditures so we can actually see them?

MR ULLIANICH: I cannot give you them now but as a Treasury officer I can tell you that I am aware of and have seen those forward estimate figures.

724 MS STEVENS: Will you provide them to the committee?

MR ULLIANICH: Yes.

725 MS STEVENS: How long will it take you to provide them?

MR ULLIANICH: I will have to go back to the Director of Budgets. I am not in the budget area, but I will have to request that information from the budget area.

726 MS STEVENS: So, you will request that and will provide the information of the forward expenditures which show that this has been budgeted for? You will provide that to the committee?

MR ULLIANICH: Yes, to the extent that that information is available from the budget area. I cannot create those numbers.

727 MS STEVENS: I thought I understood from what you just said that they exist?

MR ULLIANICH: They existed back at the time of the budget, because of course that is the basis upon which the budget was framed.

728 MS STEVENS: That is what we would like to see.

MR ULLIANICH: Yes.

729 MS STEVENS: We have not been able to find any specific figures ourselves. There are references to it, but no specific dollar amounts.

MR ULLIANICH: As long as it is understood that I have made the point that at that point in time it was inappropriate to include any number in the budget papers, because the Government was still negotiating with the provider of that service.

730 THE PRESIDING MEMBER: That is well understood.

731 MR WILLIAMS: If there is no specific number at the bottom of the budget, is it reflected there?

MR ULLIANICH: It is reflected in the forward estimates. The budget itself makes the statement that the project has been funded. I refer to Budget Paper 2, section 2.11:

Major new infrastructure projects costing around \$300 million over three years are included within the budget forward estimates. Funding is provided for:

A new Government wide area trunked, mobile radio, paging and mobile data telecommunications network. . .

732 MS STEVENS: I want specific forward estimates and forward expenditures. I want to know specific dollar amounts. While you have said it is not possible for specifics to be put down, every agency that has come before us has said that this will be budget neutral, but no-one has put aside any money that they know of for this and have said simply that it will be funded through the GRN contract.

MR ULLIANICH: The contract is the cost and there are several sources. Funding for the GRN was planned, and I can refer to the budget statements, which alluded to the emergency services levy. A component of the emergency services levy was intended to be applied to the GRN. There was also an appropriation out of the capital works budget for the balance.

733 MS STEVENS: I would like the details.

MR ULLIANICH: Another source of funding is that when we came to look at how all this was going to be paid for we in Treasury saw that agencies presently have a cost to maintain their operating and communication networks. We consider that we have conservatively estimated that there is an amount of \$5 million service-wide and we would say to agencies, 'Yes, you are going to be left in a budget neutral position. You must be spending something now and we will look closely at each agency.' As I say, we have made an assumption that we will be able to claw back \$5 million per annum.

734 THE PRESIDING MEMBER: That is legitimate. The committee has not a problem with that. Agencies need to know that is going to happen, and it is quite proper that it should happen. I do not think anyone should expect to get away with money that they formerly allocated for the maintenance of obsolete or near obsolete equipment and use it for some other purpose whilst they derive a benefit from general revenue which enables them to do the same thing, without that expense, such that the taxpayer is expected to fork out even

more.

MR ULLIANICH: Exactly. That would be double accounting.

735 THE PRESIDING MEMBER: We are not on about that. We are simply keen to understand what those items are agency by agency so that, if and when any of them complain, we will not have to call you back before the committee. We will know already what the answer is. We do not say that it might not be necessary to rearrange those things but, in the course of ensuring that there are no shenanigans and gainsay in the negotiations, we want to know the figures now.

736 MS STEVENS: I am asking you to provide clearly and precisely the evidence that exists in Treasury documents that this project has been fully funded.

737 THE PRESIDING MEMBER: What do you mean by 'precisely'?

738 MS STEVENS: I want all the evidence that the appropriations have been made.

MR ULLIANICH: You have asked me for the bits in the budget that refer to the funding and for the forward estimates.

739 MS STEVENS: We want to be clear that in fact they are appropriated. As I have said to you, lots of people have tried to find this and we have not been able to. Perhaps we are not as clever as Treasury officials, but I want you to show us what we have not been able to find, that is, that all of these costs have been appropriated or budgeted for.

MR FOREMAN: The budget document we are referring to is primarily in relation to the year 1998-99 and in that year nothing is planned to be spent. The spending will be in the following year. You are asking to find things in documents that will not be there.

740 MS STEVENS: We are also asking for the forward plans. What proportion of the emergency services levy will be devoted to paying for the GRN?

MR ULLIANICH: That is presently being negotiated between Treasury and Finance, Attorney-General's and relevant emergency services. I have not been party to those discussions. I can say in general terms that, to the extent that the emergency services levy or the GRN can be properly and appropriately attributed to emergency services, the philosophy is that funding will be made available via a levy.

741 MS STEVENS: You are not certain as to the proportion? It has not been decided yet?

MR ULLIANICH: I cannot tell you what are the dollars, but those discussions are proceeding right now.

742 MS STEVENS: I have the paper from the Working Party on the Emergency Services levy and it states that, if the emergency services levy is to be used to pay for the GRN, the levy will have to grow from \$80 million to \$110 million. That was before the blow-out in the cost of the radio network. That would mean the difference is even greater now. Over the next three years the emergency services levy will be about \$50 million, so from where is the extra money coming?

MR ULLIANICH: There are several issues there. Given the nature of the GRN you have fairly lumpy expenditure up front because you have the capital works being conducted and that process will roll out for about three years. The funding sources were the \$5 million per annum claw-back from agencies' existing spending, the appropriate amount to be drawn from the emergency services levy and the rest was capital from the capital works budget. Again, it is my understanding that, if the costs exceed those that were known at the time of the budget preparation, there is sufficient head room in the budget to accommodate those costs, bearing in mind, as Peter Fowler alluded to, the actual contract for physical construction of the GRN has not increased to any significant degree. We are talking about a seven-year period where those extra costs are being incurred.

743 MS STEVENS: You said earlier in an answer that the GRN project for agencies was going to be budget neutral to an agreed base, but does that mean that agencies could be up for extra costs over a period?

MR ULLIANICH: This issue has been discussed several times. From a Treasury perspective you have to start from a base. We are building a State-wide network which has a capacity to basically accept a much larger number of radios and pagers than was currently in use in this State. When the process of looking at how this would be funded was undertaken, the equitable way of doing it was to go to each agency and say, 'You are going to get something better than what you have now because of the inter-operability and everything else the network offers.' But recognising that in one shape or form they were to be charged for the additional benefit, they would only be coming back to us to appropriate more funds. It is six of one and half a dozen of the other as to how we do it. The fairest and simplest way and the one that works out most easily administratively is that they identify the equipment they are now using. That will be replaced with GRN compatible equipment on a budget neutral basis. Again, the philosophy behind it is that, if you make the whole lot completely free, then every person will want a radio and a pager. To the extent that agencies want to go above that base, they will have to make a business case themselves.

744 THE PRESIDING MEMBER: Or find it in some other part of their line?

MR ULLIANICH: Or find it within their own budget, yes. That is the logic behind the approach.

745 MS THOMPSON: A simple example is that the new handsets have excellent emergency call facilities and it has been mentioned today that, if agencies choose, they will have access to the emergency call service. Does that mean that agencies will have to pay extra for that service?

MR ULLIANICH: You are getting into a technical area and there are people more competent than me to answer. I understand that functionality exists largely in the terminal that they are purchasing. If they are purchasing a more complex and functionally capable terminal than what they have got now, the issue of costs would have to be looked at in that instance. In all these things there will be a little bit of give, take and negotiation. Ultimately that is how it will work out, with that underlying philosophy.

746 MS THOMPSON: Given that design for the system began in 1992 and that you did not really come into it until 1997, do you have any idea why it is that all these costs have only now been identified in 1998-99? It seems to have taken a long time.

MR ULLIANICH: Like many of these things which are complex capital expenditures and which have their genesis several years before, they can be pie in the sky for a very long time until finally the Government starts talking seriously with one, two or three bidders and goes out to the market seeking requests for proposals. It is at that point that Treasury gets serious about it because it looks like some money is going to be spent. I think the process was appropriate. We are looking at a process where the Government had specified requirements. It went to the market with those specified requirements seeking a solution to those requirements. The market responded.

We have engaged our expert consultants to advise us along the way and we are here today having gone through a process of evaluating bids that we have received from the market, taking advice from our consultants, looking at the financial implications of it and so on. The process from a Treasury officer's point of view has been robust and defensible.

747 THE PRESIDING MEMBER: There being no further questions, I thank all witnesses for their attendance today.

THE WITNESSES WITHDREW