[redacted]

Our Ref: LS4944 ~ file 13/945

Ms Tania Strathearn
Merit Review and Investigations Officer
Dispute Resolution Branch
Office of the Australian Information Commissioner
GPO Box 5218
SYDNEY NSW 2001 By email to Tania.Strathearn@oaic.gov.au

Dear Ms Strathearn

Re LS4944 Request by M Cordover for IC Review of decision to refuse FOI Request LS4849

I refer to your email of 20 March 2014 5:10 PM and your letter of 20 March 2014 enclosed in that email about this matter.

REQUEST FOR DOCUMENTS

2 In your letter of 20 March 2014 you asked for the following. My response to each request appears below the request.

1. *The FOI request, and any correspondence that modifies its scope*

   The FOI request is attached (Attachment A). There was no correspondence modifying the scope of the request.

2. *The names and contact details of anyone who was consulted by the AEC, formally under ss 15(7), 26A-27A, or informally (if the informal consultation influenced the AEC's decision)*

   There were no consultations, formal or informal under sections *15(7), 26A-27A* of the *Freedom of Information Act 1982* (the 'FOI Act')*.*

3. *Copies of any correspondence between the AEC and anyone who was consulted, including file notes of any relevant telephone conversations*

   There was no such correspondence.

4. *Either the documents to which access was refused (documents in issue), in electronic format or a detailed schedule and description of the documents.*

I attach a schedule of the relevant documents (Attachment B).

CONSIDERATION OF MR CORDOVER'S REQUEST.

3 Mr Cordover's FOI Request was considered by Paul Pirani, Chief Legal Officer of the Australian Electoral Commission ('AEC') who decided to refuse the FOI Request and notified Mr Cordover of his decision by letter dated 4 November 2013 (Attachment C).

4 Mr Cordover sought internal review of Mr Pirani's decision and made contentions in support of that review by email dated 8 November 2013 3:52 PM (Attachment D).

5 Mr Cordover's request for internal review of Mr Pirani's decision to refuse the FOI Request was considered by Tom Rogers, Deputy Electoral Commissioner who also decided to refuse the FOI Request and notified Mr Cordover of his decision by letter dated 9 December 2013 (Attachment E).

RESPONSE TO MR CORDOVER'S CONTENTIONS

6 Mr Cordover applied for review by the Information Commissioner of the decision of Mr Rogers to refuse the FOI Request made contentions in support of his application for internal review and further contentions in support of his application (Attachment F). For convenience each contention is referred to as the 'Internal Review contention' (Attachment D) and the 'OAIC contention' (Attachment F) respectively.

Wikipedia as an authority

7 The OAIC contentions at paragraphs 72, 108, 111, 117, 145 and 146 rely on Wikipedia as an authority to support a contention. Wikipedia is not an authoritative source and each citation needs to be checked. It is burdensome to cast the task on the AEC.

8 In *Australian Competition and Consumer Commission v P. T. Garuda Indonesia (No 9) [2013] FCA 323* Perram J accepted that would be unfair to expect an opposing party to explore the correctness of the Wikipedia entries.

9 Accordingly, these citations should be given little weight.

Preferred format of documents

10 Paragraph 31 of the OAIC contentions complains about the AEC practice of providing him with scanned versions of signed correspondence. Mr Cordover's complaint is misconceived. Subsection 20(2) of the FOI Act applies to access to the information that is the subject of the FOI Request and **not** to the correspondence about the FOI Request.

11 There is good reason for providing a scanned copy of correspondence when transmitting electronic versions. First, it is a facsimile of the hard form document.

Second, it is less amenable to tampering. This was accepted as a valid consideration in *'BA' and Merit Protection Commissioner* [2014] AICmr 9.

12 The question about the format to be given to requested documents depends on the outcome of the review whether the documents constitute a trade secret and are thus exempt under paragraph 47(a) of the FOI Act.

Preliminary relief sought by Mr Cordover

13 Paragraph 52 of the OAIC contentions seeks preliminary relief by way of being given access to the list of documents considered by the AEC decision makers on the basis that he contends that the AEC wrongly determined that those documents are themselves part of the trade secret and so exempt.

14 The AEC opposes the grant of this relief. The documents listed by the AEC give an insight into the implementation of the algorithm by the source code and so must remain secret if the trade secret in the algorithm and its expression in the source code implementation is to be preserved.

15 It is not possible to determine the preliminary relief without first determining whether there is a trade secret. The determination whether there is a trade secret carries with it a decision about what constitutes the trade secret. This is shown by the repetitious contentions by Mr Cordover on this point. Those contentions are addressed below when examining Mr Cordover's contentions about the trade secret itself.

16 At paragraph 57 of his OAIC contentions Mr Cordover contends:

> 57 No specific reason why the schedule would be exempt was cited. This constitutes a failure by the AEC to give reasons as required by s 26(1)(a) of the FOI Act.

17 This contention is unfounded. The AEC gave the reason in Mr Roger's letter (Attachment E) notifying the outcome of the internal review at paragraph 84 which paragraph Mr Cordover addresses at paragraph 59 of his OAIC contentions.

18 At paragraph 60 of his OAIC contentions Mr Cordover contends:

> 60 There is no exemption in the FOI Act for documents which give general guidance to a person on how to uncover a trade secret.

19 Mr Cordover neglected to say that at paragraphs 83 and 84 of Mr Roger's letter to him he was told:

> 83 However, subsection 26(2) of the FOI Act provides:
>
> > **26 Reasons and other particulars of decisions to be given**
> >
> > (2) A notice under this section is not required to contain any matter that is of such a nature that its inclusion in a document of an agency would cause that document to be an exempt document.
>
> 84 I found that listing the documents in this notifying you of my decision would necessitate disclosing exempt material by reason that it would give general guidance to a person on how to uncover the trade secret protecting the

EasyCount Software. I decided that it was inappropriate to provide a list of the retrieved documents.

20 The AEC contends that section 55L of the FOI Act applies to Mr Cordover's request for preliminary relief.

21 Section 55L of the FOI Act provides:

> **55L Decision on IC review—no power to give access to exempt documents**
>
> (1) This section applies if it is established in proceedings on an IC review that a document is an exempt document.
>
> (2) The Information Commissioner does not have power to decide that access to the document is to be given, so far as it contains exempt matter.

22 It follows that if the AEC's contention that there is a trade secret for the purposes of section 47 is accepted then the question whether the names of the documents listed in the schedule of documents are part of the trade secret then arises for consideration. Mr Cordover's contention attempts to put the cart before the horse.

Description of Easy Count

23 EasyCount is the AEC's proprietary software owned by the Commonwealth of Australia (and administered by the AEC) that is used for counting and distributing preferences in:

(a) Senate elections;

(b) Industrial elections; and

(c) Fee for service elections.

24 EasyCount is a registered trade mark (No. 986740) as follows:

> **Goods & Services**
>
> **Class: 9** Data processing equipment being an automated vote counting software program
>
> **Class: 35** Business administration, business management
>
> **Endorsements:** Provisions of subsection 41(5) of the *Trade Marks Act 1995* applied.*

25 The EasyCount Software allows computerised counting of ballots for a variety of different voting methods used by organisations. This software is amended as organisations develop new voting systems. EasyCount produces many detailed reports to assist Returning Officers and has further proved its value in assisting scrutineers to follow the complex counting process involved in some electoral systems.

26 EasyCount was originally developed for use in industrial elections and was adapted for use in other fee for service elections and the Senate Count.

EasyCount is used to conduct the count electronically by entering ballot paper data into the system.

27 The EasyCount Software has a common code-base to support all the voting methods (eg. Senate, Fee-for-Service, etc). This means that a member of the public could gain access to, and leverage, AEC intellectual property stored in the source code-base for any EasyCount edition (ie. Senate, ICE, or SAEC).

28 EasyCount Software consists of over 270,000 lines of code.

Algorithms

Background on algorithms

29 The AEC notes that the OAIC contentions present algorithms in a simplistic way. This presentation trivialises the task in as much as it does not acknowledge that the vote counting algorithm is not simple and that the implementation of that algorithm in the source is quite complex and is the product of the application of specific knowledge and skills taking a lot of time and effort. This is detailed at paragraph 36(b) of this letter.

30 In particular paragraphs 117 and 118 of the OAIC contentions are irrelevant. The various voting systems accommodated by the EasyCount Software and their associated counting mechanisms are not 'simple' as described by Mr Cordover. The output by experts engaged by the AEC to develop and explain the operation of the voting systems and the associated counting mechanism is intellectual property owned by the AEC (and best protected as trade secret).

31 The OAIC contentions do not address that many problems are capable of being solved by different algorithms that produce the same result and that the simplicity of any algorithm is a function of the relative skills of the drafter against drafters writing other algorithms implemented as source code addressing the same problem. It is not a given that drafters writing an algorithm implemented as source code will do it the same way without variation. The greater the complexity the greater the scope for variation.

32 It is trite to observe that some solutions will be more efficient than others. The competitiveness of the EasyCount Software is a function of its efficiency.

Compound programs

33 As regards paragraphs 122 to 126 of the OAIC contentions, the AEC observes that:

(a) the context of the Senate counting component of EasyCount Software addresses the requirement of sections 273A(5) and subsection 273(8) to 273(32) of the *Commonwealth Electoral Act 1918* (the 'Electoral Act') (Attachment G);

(b) each permutation of the counting principles requires its own algorithm, the complexity of which is a function of the complexity of the relevant permutation of counting required in subsection 273(8) to 273(32) of the Electoral Act.

(c) how these 'simple' algorithms work together is a matter of some complexity.

Ease of re-creating the algorithm

34 As regards paragraphs 152 to 153 of the OAIC contentions, Mr Cordover ignores paragraphs 1.1 (a formatting infelicity) and 69 to 73 of Mr Roger's letter to Mr Cordover notifying the outcome of the internal review (Attachment E).

35 Paragraph 155 of the OAIC contentions introduces evidence that Mr Grahame Bowland has written code after two night's work that required 700 lines of Python code.

36 The AEC observes that:

(a) the EasyCount Software is constituted by over 270,000 lines of code (see paragraphs 98 and 99 of this letter);

(b) it is manifest that the 700 lines of code produced by Mr Bowland do not in any way address the complexity that exists in 270,000 lines of code in the EasyCount Software;

(c) Mr Bowland used data published by the AEC on the intranet at its Virtual Tally Room facility, in particular the AEC webpage *Senate downloads page;* and

(d) the data published on the AEC webpage was the output after operation of the EasyCount Software. The algorithm for producing this output is part of the trade secret.

37 The conclusion seems irresistibly to be that Mr Bowland has written an algorithm that addresses only a small part of the algorithm in the EasyCount Software source code. This evidence is insufficient to support Mr Cordover's contention that alternative algorithms are publicly available.

Source code or software

38 Paragraph 26 of the OAIC contentions opines that the software is in fact a set of scripts intended to be interpreted (as opposed to compiled) by a computer. The AEC notes that the software is compiled – that is to say that the source code compiled into binary (executable) format.

Competitors for fee for service elections

39 The AEC has identified a number of competitors for the services provided using EasyCount (6 private sector and 8 State and Territory electoral commissions) who are listed with the competing services described in Attachment B of Mr Rogers' letter to Mr Cordover (Attachment E). Mr Cordover has also identified other competitors: see paragraph 166(b) of the OAIC contentions.

40 The AEC remains opposed to the release of EasyCount software and documentation because of its commercial importance to the AEC.

Grounds for refusal

41 It was open to the decision maker on internal review to decide that the requested documents are exempt from release under the FOI by reason of either limb of section 47 of the FOI Act, namely:

(a) paragraph 47(1)(a) which exempts documents that disclose trade secrets; and

(b) paragraph 47(1)(b) which exempts documents that contain any other information having a commercial value that would be, or could reasonably be expected to be, destroyed or diminished if the information were disclosed.

42 If it is accepted that the EasyCount Software source code is part of a trade secret then the need to consider alternative grounds for conditional exemption under Division 3 (Public Interest Conditional Exemptions) of Part IV (Exempt documents) of the FOI Act need not be addressed. The consideration of competing public interests required by section 11A of the FOI Act in relation to conditional exemptions operates to muddy the waters in addressing the trade secret issue.

Trade Secret

AEC View

43 Section 47 of the FOI provides:

> **47 Documents disclosing trade secrets or commercially valuable information**
>
> (1) A document is an exempt document if its disclosure under this Act would disclose:
>
> (a) trade secrets; or
>
> (b) any other information having a commercial value that would be, or could reasonably be expected to be, destroyed or diminished if the information were disclosed.
>
> (2) Subsection (1) does not have effect in relation to a request by a person for access to a document:
>
> (a) by reason only of the inclusion in the document of information concerning that person in respect of his or her business or professional affairs; or
>
> (b) by reason only of the inclusion in the document of information concerning the business, commercial or financial affairs of an undertaking where the person making the request is the proprietor of the undertaking or a person acting on behalf of the proprietor; or
>
> (c) by reason only of the inclusion in the document of information concerning the business, commercial or financial affairs of an organisation where the person making the request is the organisation or a person acting on behalf of the organisation.

(3) A reference in this section to an undertaking includes a reference to an undertaking that is carried on by, or by an authority of, the Commonwealth, Norfolk Island or a State or by a local government authority.

44 The AEC in accordance with subsection 93A(2) of the FOI Act had regard to guidelines under section 93A of the FOI Act issued by the Information Commissioner (the 'OAIC Guidelines') when considering Mr Cordover's FOI Request. In particular, when considering the application of section 47 of the FOI Act the AEC had regard to Part V *Exemptions* of the Guidelines.

45 The FOI Request did not trigger the carve out from exemption provided in subsection 47(2) because the requested documents do not relate to information about the applicant, Michael Cordover. Mr Cordover concedes this at paragraph 44 of the OAIC contentions.

46 A trade secret is information possessed by one trader which gives that trader an advantage over its competitors while the information remains generally unknown: see *Department of Employment, Workplace Relations and Small Business v Staff Development and Training Company* (2001) 114 FCR 301.

47 The determination as to whether there is a trade secret is primarily a question of fact to be determined by the decision maker: see *Searle Australia Pty Ltd v Public Interest Advocacy Centre and Anor* (1992) 108 ALR 163 ('Searle's Case').

48 It was open to the decision maker to find that the requested documents contain information about a trade secret of the AEC having regard to:

(a) The facts narrated at paragraphs 23 to 39 of this letter.

(b) Sections 7A and 7B of the *Commonwealth Electoral Act 1918* which authorise the AEC to enter into arrangements for the supply of goods and services to any person or body and charge reasonable fees for such supply.

(c) The AEC licenses EasyCount Software to other electoral bodies.

(i) The Electoral Commission of Queensland has been licensed to use it to conduct local government elections between 2004 and 2012.

(ii) The South Australian Electoral Commission has since 2005 been licensed to use it in Legislative Council elections and local government elections.

Negotiations are underway to renew the licence.

(iii) The Northern Territory Electoral Commission leased it since 2008 for use in local government elections and by-elections.

Negotiations are underway to renew the licence.

The terms of the licence are for use of the Software for certain electoral events and do not permit the use of the EasyCount Software for fee for service or industrial elections without the permission of the AEC.

(d) The AEC has an Industrial Elections Program.

Under the *Fair Work (Registered Organisations) Act 2009*, the AEC must conduct all elections for office in registered organisations unless an exemption has been granted by the Fair Work Australia. This includes all elections and amalgamation ballots for trade unions and employer organisations that are registered under the Act. These elections are usually conducted by means of postal voting, and a wide variety of electoral systems are used. EasyCount supports these elections.

EasyCount Software is used to conduct industrial elections.

The Industrial Elections Program is budget funded.

(e) The AEC has two Programs whose business is to provide goods and services for reward to other persons and bodies, namely:

(i) Protected Action Ballots Program

Under Division 8 (Protected Action Ballots) of Part 3-3 (Industrial Action) of Chapter 3 (Rights and responsibilities of employees, employers, organisations etc.) of the *Fair Work Act 2009* the AEC is required to conduct Protected Actions Ballots ('PABs') unless an organisation is exempted from this requirement.

Most Protected Action Ballots are straight forward and do not require the use of Easycount. However, EasyCount is able to be used in the conduct of the more complex Protection Action Ballots.

(ii) Fee For Service Program

The Fee for Service Program offers independent fee-for-service solutions for the election of committee members, office bearers and staff representatives. It also offers to conduct workplace agreement ballots, referendums, plebiscites and polls.

EasyCount is regularly used in the conduct of the Fee For Service Program elections and the complex plebiscites/polls.

(f) Both Programs as part of their business use a configuration of EasyCount that has been customised to their business model.

The customisation did not change the algorithm used in the Senate EasyCount Software.

(g) EasyCount gives each Program an advantage over its competitors because of the efficiency it provides to the allocation of preferences using diverse electoral systems by electronic means.

(h) The Fee for Service Program contributed $1,502,403.60 to the AEC earning in the last financial year.

(i) EasyCount has not been published by the AEC and is not itself available for sale to the public. As mentioned in paragraph (c) it is licensed to those Australian Electoral Commissions that desire to use it.

The AEC offered to provide it for review by stakeholders (political parties) but that offer was never accepted.

(j) Both Programs believe that disclosure of EasyCount to a competitor would be liable to cause real or significant harm to the business of the Program because it would allow competitors to offer to provide similar services at a lower cost than now offered. The reason for this belief is that the provision of this information would enable a competitor to provide commercial voting and counting services at a lower cost without the need the incur and recoup the development costs.

(k) The investment made by the AEC in developing EasyCount is not easily quantified as the program is under regular review and enhancement. That investment is considerable given that it currently contains 270,000 lines of code. It would take a team of 10 programmers working at the rate of productivity claimed by Mr Bowland (see paragraph 155 of the OAIC contentions) 78 days to write the source code.

A further review of all documentation of EasyCount is scheduled to be undertaken in 2014 to ensure it is accurate, finalised and stored in an easily accessible location.

49 The AEC believes that EasyCount is a trade secret for the reasons above. It further believes that both the source code and the user manuals (apart from the EasyCount Senate User Guide – Document Nos. 13 and 58) are part of the trade secret. Disclosure of the manuals (other than Document Nos. 13 and 58) could enable a technically literate person to devise a program that replicates the functionality of EasyCount. This is not the case with the EasyCount Senate User Guide (Document Nos. 13 and 58) which does not contain the algorithm.

Addressing the OAIC contentions

(a) Specific identification of the trade secret

50 Paragraph 128 of the OAIC contentions asserts that a trade secret must be sufficiently identified and cites in foot note 42 *O'Brien v Komesaroff* (1982) 150 CLR 310 ('Komesaroff's Case') as the authority to support this contention. However, Komesaroff's Case has no application to consideration of a trade secret that has been kept secret. In Komesaroff's case the court was asked to give relief where there had been a breach of confidence in relation to the trade secret.

51 Pertinently in Komesaroff''s case Mason J (as he then was) said:

> 43. It is a fundamental problem with the information which the respondent seeks to protect that it is information which, by way of advice to others, he regularly publishes to the world at large, albeit for a limited purpose. The nature of such information ill accords with the accepted conception of confidentiality, which in substance involves the person seeking to protect the information largely keeping it to himself. See Ansell Rubber Co. Pty. Ltd. v. Allied Rubber Industries Pty. Ltd. [1967] VicRp 7; (1967) VR 37, at p 49 . In the result the respondent's relief in respect of the documents should be confined to infringement of copyright. (at p327)

52 At paragraph 44 Mason J said:

> … One needs to know not only what was the information conveyed but also what part of that information was not common knowledge. (at p327)

53 In the case of the trade secret about the EasyCount Software the converse applies. No information is being conveyed! None of the information about the algorithm and its implementation in the source code is common knowledge.

54 Paragraph 130 of the OAIC contention is not relevant. The AEC is protecting the continuance of the trade secret and not seeking relief for a breach of confidence. It asserts that there is a secret, namely the contents of the algorithm which has not been breached and that secret is a trade secret.

55 The submission in paragraph 132 of the OAIC contentions is flawed in as much as Komesaroff's Case was not about a trade secret.

56 Paragraph 133 of the OAIC contentions seeks to uncover the trade secret indirectly by soliciting information that would give a person sufficient insight to be able to replicate the algorithms. This should not be permitted.

(b) Describing the trade secret

57 Paragraph 137 of the OAIC contentions does not address that the output mentioned in paragraph 137(b) is the ultimate outcome but is not the output for each counting routine which will indicate who is excluded and who continues to be a candidate and receive preference votes from the last excluded candidate after those preference votes have been weighted at that point.

58 Further paragraph 137(c) of the OAIC contentions is an oversimplification the output and depends on assumptions that are far more complex than that stated in

the contention. For example the contention ignores the complexity of transferring weighted preferences in particular circumstances.

(c) General Knowledge of the trade secret

59 The AEC takes issue with the assertion in paragraph 143 of the OAIC contentions that the counting algorithm is well known. If it is well known, why has Mr Cordover not produced evidence of what the algorithm is? Further, there is a distinction between knowing what the algorithm is about and knowing how it functions. The design and implementation of the algorithm in the EasyCount Software is neither public knowledge nor 'well-known'.

60 Paragraph 145 of the OAIC contentions wrongly characterises as trivial the process of translating the procedure described in the AEC webpage *http://www.aec.gov.au/About_AEC/AEC_Services/Industrial_Elections/voting.htm*. Implementation of the algorithm, however, is anything but trivial (as explained at paragraphs 65-68 of Mr Roger's letter (Attachment E)). Part of the variability will be how the algorithm is applied to different computing platforms.

61 As regards paragraph 146 of the OAIC contentions, the assertion is not made out. On examination, foot note 46 cites the standard preferential system which is not relevant to Senate counting. That is not to say that the EasyCount Software does not accommodated the standard preferential system. It does that and much more.

62 Paragraph 147 of the OAIC contentions cites examples of alternative software implementation of voting systems. However it does not give evidence to show how these alternative voting systems are properly comparable to the EasyCount Software.

63 The alternative software may do the work of parts of the algorithm without doing the work of the whole algorithm. The way that they do that work may in no way be functionally comparable with the EasyCount Software. The OAIC contentions provide no evidence on this point.

64 In any case, so long as the EasyCount software remains an unpublished trade secret the use of alternative source codes is a business decision for potential clients of the AEC in deciding whether use of the AEC EasyCount Software represents value for money. It is not of itself an argument supporting publishing the EasyCount Software source code.

65 As regards paragraph 149 of the OAIC contentions, the contention misrepresents the position. The legislative provisions (see Attachment G) set out the requirements that must be achieved at each processing step and are no more than instructions that the drafter of the algorithm had to apply in designing the algorithm and its implementation in the source code.

66 Paragraph 150 of the OAIC contentions is unsupported by evidence adduced by Mr Cordover to show that the algorithms for the EasyCount Software are publicly known. The bare assertion does not make it so. The AEC has given evidence that it has not published the algorithm in the EasyCount Software (including its implementation by the source code) to the public generally. It has also given

evidence that it licenses use of the EasyCount Software to Australian Electoral Commissions on terms that precludes its use for fee for service and industrial elections. Further those licence terms forbid publication of the EasyCount Software without permission of the AEC. The EasyCount Software is not in the public domain.

(d) Refuting the contention about the alternative trade secret – the code itself

67 As regards the contention in paragraph 177 of the OAIC contentions that the AEC may have incorrectly identified the algorithm as the trade secret where it should have claimed that the code was the secret, the AEC observes that it has asserted that the algorithm is the secret, and that the code expresses the algorithm. The code (ie. the implementation) is also of commercial value. Indeed the implementation gives the algorithm its commercial value – it makes it useful and 'real' as opposed to merely being an academic exercise.

68 The contention in paragraph 179 of the OAIC contentions that there would be no diminution of commercial value, nor any real and significant harm to the AEC, by disclosure of the source code is at variance with normal commercial usage in intellectual property law where Software companies, such as Microsoft and Apple, vigorously protect the secrecy of their source code.

69 As regards the contention in paragraph 180 of the OAIC contentions about the availability of free alternatives, and about the existence of alternatives already in use by competitors, the AEC notes that its refutation of those arguments at paragraphs 59 - 66 of this letter is also relevant.

70 The copyright contention raised in paragraphs 181 to 184 of the OAIC contentions do not address the issue that so long as the trade secret is preserved the AEC is spared the necessity of seeking damages for breach of its copyright in the source code. In civil litigation a successful party's entitlement to party v party costs is usually significantly less than the actual costs that it incurs in pursuing the action. In addition there is a considerable opportunity cost in having staff diverted to support such litigation which is better avoided at source by maintaining the trade secret.

Information having a commercial value

71 It was open to the decision maker to find that the requested documents contain information of a commercial value to the AEC having regard to:

(a) The facts narrated at paragraphs 23 to 39, and

(b) The facts narrated at paragraphs 48(b) to 48(k),

of this letter.

72 The AEC believes that EasyCount is information having a commercial value for the reasons above. As mentioned in paragraph 49 of this letter, disclosure of the manuals could enable a technically literate person to devise a program that

replicates the functionality of EasyCount without having to bear the costs of developing the software and recoup the investment made by the AEC in that regard. In all the circumstances it was appropriate to refuse access to EasyCount.

Refuting the contention that there is no commercial value in the information

73 Paragraph 164 of the OAIC contentions contends that the information comprising the trade secret is known to others. The AEC refuted this contention at paragraphs 59 - 66 of this letter.

74 The contentions in paragraph 165 of the OAIC contentions are not supported by evidence adduced by Mr Cordover and so have no weight. In particular his remarks at paragraph 165(b) of the OAIC contentions is speculative.

75 As regards paragraph 166 of the OAIC contentions, the AEC observes:

(a) Mr Cordover imputes impropriety in the marketing by the AEC of the EasyCount Software to others by suggesting that the marketing is not at arms length. He adduces no supporting evidence thus this imputation should be given no weight.

(b) Paragraphs 35 - 37 of this letter refute Mr Cordover's contention that the 'entire software has been duplicated by Grahame Bowland'.

(c) Mr Cordover lists rivals who use 'similar software'. He offers no evidence to explain why this software is similar. It is burdensome to expect the AEC to undertake an examination of this software. In the absence of supporting evidence from Mr Cordover, this contention should be given no weight.

76 Paragraph 167 of the OAIC contentions seems to be a nonsense.

77 As regards paragraph 168 of the OAIC contentions, the AEC has provided evidence at paragraph 48(c) of this letter about the earnings that the AEC secures in licensing the EasyCount Software to other Australian Electoral Commissions. The AEC also has a competitive edge in the conduct of its fee for service and industrial elections from the efficiency achieved by use of the Software. Although this is not readily quantified it contributes to the value of the Software in a significant way.

78 The contention in paragraph 169 of the OAIC contentions about Elections ACT's electronic counting system (EVACS) neglects to explain that the ACT electoral system is unique within Australia in as much as it applies the Hare-Clark electoral system.

79 The ACT is a city-state and it is easier to manage EVACS to avoid the security risks that apply to elections conducted by the AEC which are usually national and which make publication of the source code for the EasyCount software a more significant risk as regards creating opportunities for electronic attack (hacking).

Refuting the contention that the commercial value is not diminished by disclosure

80 The contention in paragraph 170 of the OAIC contentions cites the EVACS as evidence in support (see paragraph 171 of the OAIC contentions). Little weight should be given to this evidence because the two systems are not comparable for the reasons explained at paragraphs 78 and 82 of this letter.

81 As regards the contention in paragraph 172 of the OAIC contentions that disclosure of the algorithm to competitors seeking to use to develop their own counting systems would not significantly diminish the amount of time to develop their own counting systems, this is not so. What has been sought is the source code that contains both the algorithm and its implementation including the counting systems.

82 The insights flowing from access to the source code would have a significant benefit in time saving in software development of rival systems. As indicated at paragraph 48(k) of this letter the AEC it would require 78 days for a team of 10 programmers to write the source code. Programmers equipped with the algorithm and implementation in the source code could undertake the task to write comparable Software is substantially less time.

Refuting the contention that no real or significant harm arises from disclosure

83 As regards paragraph 174 of the OAIC contentions, the AEC observes that there is a flaw in the contention that release of EVACS source code is indicative of a lack of harm caused to a public sector body by that release. He has not given any evidence that shows that the functionality of EVACS makes it a substitute for EasyCount Software from a point of view of its relevance, efficiency and expense to operate.

84 The contention in paragraph 175 of the OAIC contentions that all competitors have electronic vote counting systems is indicative of a lack of significant harm from release of the source code is not sustainable. There is a risk that exposure of the EasyCount Software would enable each of these competitors to improve their products to become competitive in reality as opposed to in potential as is the case at present.

Mr Cordover's implied exemption under s. 47(1)(A)

85 Paragraph 67 of the OAIC contentions contends 'that the disclosure of the list of documents could not cause real or significant (commercial) harm to the AEC however, the list of documents is exempt because its disclosure would jeopardise the trade secret. They take their value from the trade secret as a whole.

86 Paragraph 71 of the OAIC contentions contends that disclosure of the list of document would not significantly reduce the time taken to reproduce the software product. This contention is beside the point. The point is that it is the release of the trade secret that would significantly reduce the time taken to reproduce the

software product. It is inappropriate to address this questions about components of the trade secret in isolation.

87 Mr Cordover asserts that there are alternate products to the EasyCount Software. The commercial issue is whether these alternate products offer the capacity, diversity and efficiency of the EasyCount Software which is configurable to apply a number of counting methods to meet a particular need at an acceptable price. The AEC observes that:

(a) Mr Cordover offers no evidence to support his contention the products he identifies as alternate products are appropriate substitutes for the EasyCount Software regards functionality and efficiency.

(b) value of the EasyCount Software lies in its flexibility and diversity of application. The take up of the EasyCount Software by other Australian Electoral Commissions attests to its competitiveness regarding price.

88 At paragraph 73 of the OAIC contentions Mr Cordover claims that competitors would still be required to expend significant time and money developing a vote counting system. This contention is unfounded. The algorithm and its implementation in the source code includes configuration for different vote counting systems. In any case the question is not what expenditure remains to be made but what expenditure would be avoided by having recourse to the information constituting the trade secret. Mr Cordover attempts to finesse this point.

Implied claim of conditional exemption under s. 47E

89 The AEC agrees that an argument may be made that the documents may also be exempt under paragraph 47E(d) of the FOI Act but sees no need to address this consideration if the exempt status of the documents as a trade secret (section 47 of the FOI Act) is upheld.

90 The AEC observes that an argument may be made also that the documents are exempt under paragraph 47E(b) of the FOI Act but sees no need to address this if the exempt status of the documents as a trade secret (section 47 of the FOI Act) is upheld. The AEC notes that the scrutiny process in elections applied by the AEC would trigger the application of paragraph 47E(b) of the FOI Act.

91 The AEC observes that the canvassing of the need to balance competing public interests in making a decision required by section 11B in respect of conditional exemptions confuses the issue as regards the status of the requested documents as trade secrets. Such documents are exempt outright and section 11B does not apply to the making of a decision about their status as trade secrets.

92 If the Information Commissioner is minded to consider the application of section 47E to the FOI Request, the AEC will provide a specific submission addressing the matter. However, at this stage the AEC does not believe that requiring this issue to be addressed will lead to a quick resolution of this matter.

The provision of an edited version contention

93 As regards the contention that it should be possible to edit the source code under section 22 of the FOI Act, the AEC does not see that this is appropriate. The protection of the trade secret extends to the entirety of the documents comprising the secret. This is a sufficient reason for not producing an edited version of the documents. This reason is consistent with the principle enunciated by Einfeld J in *Graeme Noel Day v Collector of Customs* 130 ALR 106 (1995) that:

> Where a document is not released at all, it will be appropriate in general that the decision-maker make some reference to section 22 -- even if to state simply or with a brief reason that it was not possible to release even a heavily expurgated version of the document.

94 However, another reason exists for not releasing an edited version of the EasyCount Software. The EasyCount Software contains over 270,000 lines of code.

95 Subsection 22(1) of the FOI Act provides:

> **22 Access to edited copies with exempt or irrelevant matter deleted**
>
> *Scope*
>
> (1) This section applies if:
>
> (a) an agency or Minister decides:
>
> (i) to refuse to give access to an exempt document; or
>
> (ii) that to give access to a document would disclose information that would reasonably be regarded as irrelevant to the request for access; and
>
> (b) it is possible for the agency or Minister to prepare a copy (an edited copy) of the document, modified by deletions, ensuring that:
>
> (i) access to the edited copy would be required to be given under section 11A (access to documents on request); and
>
> (ii) the edited copy would not disclose any information that would reasonably be regarded as irrelevant to the request; and
>
> (c) it is reasonably practicable for the agency or Minister to prepare the edited copy, having regard to:
>
> (i) the nature and extent of the modification; and
>
> (ii) the resources available to modify the document; and
>
> (d) it is not apparent (from the request or from consultation with the applicant) that the applicant would decline access to the edited copy.

96 Paragraph 5.3 of the OAIC Guidelines say:

> 5.3 A 'document' includes any part of a document that is relevant to the terms of the FOI request. Consequently, a decision maker should consider whether it is

> practicable to delete exempt material and provide the balance to the applicant. If it is practicable to delete the exempt material and retain a copy of a meaningful non-exempt edited copy to provide to the applicant, an agency or minister must do so (s 22).

97 It follows for the reasons explained at paragraph 93 that section 22 does not apply to the FOI Request as a result of the failure to meet the test for its application in paragraph 22(1)(c) of the FOI Act.

98 This is an unavoidable consequence of the need to review over 270,000 lines of code. The magnitude of the exercise means that the condition for applying section 22 of the FOI Act specified in paragraph 22(1)(c) of the FOI Act is not met.

99 Allowing 5 minutes to be spent on reviewing each line, deciding whether a redaction is appropriate and identifying the reason for the redaction in terms of the FOI Act and making the redaction for each line code of would require a minimum of 22,500 hours of work for the reviewer. Obviously considerations of timeliness would require a team of reviewers to be used with the need to appropriately supervise the team to ensure consistency in fulfilling the task. A team of 10 reviewers would complete the review in 300 days. The AEC would not be able to accommodate this drain on its staff resources without disrupting its ordinary operations.

100 There remains the question whether the extent of editing necessary to protect the algorithm and its implementation in the source code would be so extensive that it would be tantamount to a refusal to release the document in any case.

Preparation of Attachment B

101 Attachment B has been prepared in accordance with paragraph 8.53 of OAIC Guidelines which says:

> 8.53 The decision needs to clearly identify the documents considered by the decision maker for release (without disclosing exempt material if exemptions are claimed). Preparing a schedule of documents is often helpful in the decision making process. When the decision is made, the schedule (minus any exempt material considered during the process) can be attached to the statement of reasons.

102 However, subsection 26(2) of the FOI Act provides:

> **26 Reasons and other particulars of decisions to be given**
>
> (2) A notice under this section is not required to contain any matter that is of such a nature that its inclusion in a document of an agency would cause that document to be an exempt document.

103 It was open to the decision maker to find that listing the documents in Attachment B in a notice to the applicant notifying a decision would necessitate disclosing exempt material by reason that it would give general guidance to a person on how to uncover the trade secret protecting the EasyCount Software.

104 This was done in the internal review as was explained at paragraphs 82-84 of Mr Rogers's letter to Mr Cordover (Attachment E).

PROCESS OF REVIEW

105 The AEC has noted paragraph 185 and 186 of the OAIC contentions and observes that should it transpire that Mr Cordover is allowed to make further submissions in relation to this matter then the AEC would wish to have the opportunity of rebutting any new arguments or evidence cited in those submissions.

Yours sincerely

Owen Jones
Senior Lawyer
Legal Services

17 April 2014

Attachments included in this letter

- Attachment A *Original FOI Request;*
- Attachment B *Schedule of Relevant Documents*;
- Attachment D *Request for internal review*
- Attachment G *Extracts from the Commonwealth Electoral Act 1918*

Enclosures sent with this letter

- Attachment C Letter from Mr Pirani to Mr Cordover 4/11/2013 sent as Acrobat file *LS4849 Letter to M Cordover notifying decision 20131104.pdf*
- Attachment E Mr Rogers Letter to Mr Cordover 9/12/2013 sent as Acrobat file LS4883 Letter to M Cordover notifying decision 20131209.pdf
- Attachment F Request for IC review sent as Acrobat file LS4883 Internal Review Request.pdf

Attachment A

FOI REQUEST BY MR CORDOVER

From: Michael Cordover [mailto:foi+request-435-87abdfce@righttoknow.org.au]
Sent: Friday, 4 October 2013 5:43 PM
To: INFO
Subject: Freedom of Information request - Software by which Senate counts are conducted

Dear Australian Electoral Commission,

This request is in two parts. I am happy for you to consider the request as a single request as they are all closely related, or as multiple requests if that is preferable for you.

Part 1: source code for counting software

I am seeking source code for the software used to conduct the count of votes for a Senate election.

This request includes scripts or interpreted code used within another piece of software (for example, T-SQL scripts, stored procedures etc).

This request excludes software used for data entry or for interpretation of those scripts but includes data validation software if that is distinct from data entry software.

This request may encompass more than one piece of software and I seek source code for each.

Part 2: data specifications

I am seeking any documents which describe bespoke data formats used by any of the software sought in Part 1, either as input or output formats.

This request excludes any data formats which are human readable or for which published specifications are available (e.g. PDF).

For clarity, the types of documents I am seeking may include database table specifications, EBNF specifications for bespoke input data, column descriptors for CSV files, XML schemas or similar documents.

I am seeking a waiver of all associated access charges on the basis that publication of these documents would be in the public interest. In particular it would provide public confidence that the electronic count is conducted in accordance with the law.

Yours faithfully,

Michael Cordover

Please use this email address for all replies to this request:

foi+request-435-87abdfce@righttoknow.org.au

Is info@aec.gov.au the wrong address for Freedom of Information requests to Australian Electoral Commission? If so, please contact us using this form:

http://www.righttoknow.org.au/help/contact

Write your response as plain text. Only send PDF documents as a last resort. Government guidelines make it clear that PDF is not an acceptable format for you to use in the delivery of government information.

http://www.righttoknow.org.au/help/officers#pdf

Disclaimer: This message and any reply that you make will be published on the internet. Our privacy and copyright policies:

http://www.righttoknow.org.au/help/officers

If you find this service useful as an FOI officer, please ask your web manager to link to us from your organisation's FOI page.

Attachment C

LETTER FROM MR PIRANI TO MR CORDOVER 4/11/2013

[See the Acrobat file *LS4849 Letter to M Cordover notifying decision 20131104.pdf* that is provided separately.]

Attachment D

REQUEST FOR INTERNAL REVIEW

From: Michael Cordover [mailto:foi+request -435-87abdfce@righttoknow.org.au]
Sent: Friday, 8 November 2013 3:52 PM To: INFO
Subject: Internal review of Freedom of Information request - Software by which Senate counts are conducted

Dear Australian Electoral Commission,

Please pass this on to the person who conducts Freedom of Information reviews.

I am writing to request an internal review of Australian Electoral Commission's handling of my FOI request 'Software by which Senate counts are conducted'.

A full history of my FOI request and all correspondence is available on the internet at this address:

https://www.righttoknow.org.au/request/software_by_which_senate_counts

I also recognise that things are quite busy at the AEC at the moment. I am happy for this to be taken to have been received as late as 3 December (30 days from when the original decision was made) and therefore not to receive a response until early January. However I am keen not to prejudice any external review rights that might arise and I consent to the increased time on that basis.

Decisions to be reviewed

I refer to the statement of reasons for refusing access given by Paul Pirani dated 4 November 2013 (received 5 November 2013). There are three decisions contained in this letter for which I seek review:

1. The decision not to disclose the schedule of documents (reasons at [24])

2. The decision that all of the documents are exempt under s 47(1)(a) as trade secrets (reasons at [7])

3. The decision that all of the documents are exempt under s 47(1)(b) as containing commercially valuable information, the value of which could reasonably be expected to be destroyed or diminished by disclosure (reasons at [7])

As they are closely related, I will deal with the second and third decisions together.

Matters of policy

Before particularising the reasons I believe the decision was wrong at law, I note the following matters which suggest to me that the AEC should release the documents I request as a matter of policy.

The AEC s 9 FOI statement (http://www.aec.gov.au/about_aec/Publications/foi.htm) provides that the Easycount Senate User Guide is available under FOI and does not indicate that it would be exempt or partially exempt.

The AEC indicated in its supplementary submission (number 181, dated 7 February 2003) to the JSCEM inquiry into the 2001 Federal Election at [8.12] that:

"In the interests of transparency, and because there are no security implications, the code [for EasyCount] will be available for review."

As that statement recognises, confidence in the electoral system can only exist where the system is transparent. The AEC does an exceptionally good job and I do not suggest any improper motive for refusing to disclose this material. However, despite s 273A(5) of the CEA, to withhold this information is inconsistent with the general openness of the AEC's dealings.

I recognise, of course, that those policy reasons are not sufficient to suggest the original decision be varied and that there is no public interest test in the s 47 exemptions under the FOI Act. For that reason, other than as disclosed below, I do not rely on those policy reasons in seeking a review of the decision.

Schedule of documents

The reasons at [24] state that disclosure of the schedule would "give general guidance to a person on how to uncover the trade secret protecting the EasyCount Software."

This is predicated on there being a protected trade secret in the EasyCount software. I will explain below why I do not believe that to be the case.

However, even if there is a trade secret which makes the software source code exempt, I do not believe the list of documents also attracts that exemption.

Mr Pirani relies on an exemption under s 26(2) of the FOI Act. This exemption applies where the schedule would be an exempt document. Given the wording at [24], the reasons clearly imply exemption is claimed under s 47(1)(a) as the schedule would disclose a trade secret. However s 47(1)(a) requires disclosure of a trade secret; that it would "provide guidance ... on how to uncover [a] trade secret" is not sufficient. This type of material is perhaps more analogous to "know how" which is not protected.

To be protected the schedule must be itself of commercial value and confidential in nature. At most the schedule discloses the functionality and structure of the EasyCount software and its documentation. It does not disclose the way in which this functionality is

implemented. This amounts merely to a statement of purpose, not to information which is of the type which receives the protection of confidentiality.

Furthermore that meta-data is already the subject of disclosure by the AEC. Manuals for Senate and fee-for-service election editions of EasyCount are listed on http://www.aec.gov.au/about_aec/Publications/foi.htm as being available by FOI; this at least discloses their existence in the same way as the schedule would. Significant details about the structure and functionality of EasyCount are in the public domain, having been disclosed in the AEC's supplementary submission dated 7 Feb 2003 to the JSCEM enquiry into the 2001 election (submission no 181).

Even if some elements of the schedule would be exempt, certainly not all of the schedule is exempt.

The names and nature of some documents have already been published. In those circumstances the AEC should provide at least an edited copy of the schedule under s 22 of the FOI Act.

Trade secrets & commercially valuable information

I accept the definition of trade secret given in DEWRSB v Staff Development and Training Company (2001) 114 FCR 301 and reiterated in the OAIC Guidelines on FOI required to be taken into account by s 93A of the FOI Act.

To be a trade secret, the information must be able to be put to advantageous use by someone involved in an identifiable trade (DEWRSB at [43]). The decision identified two areas of competition at [18]: industrial elections (under the Fair Work (Registered Organisations) Act) and fee for service elections.

My request was not for documents relating to those elections. My request was solely for documents relating to the senate count. Consistent with the reasons, this is not subject to any degree of competition.

The decision relies on the claim at [14] that the code base for EasyCount is shared between editions to such an extent that the fee for service versions are inseparable from the senate count versions.

However, at [18](c) it is made clear that both industrial and fee for service elections have customised versions of EasyCount.

Furthermore the different counting mechanisms must form separate subroutines or functions within the computer code (if they did not, the counting method would be the same). As such those parts of the code are necessarily separable.

The decision clearly makes no attempt to provide an edited version of the documents under s 22 of the FOI Act. On the basis that the senate count functionality is separable, this is a clear error in law.

In addition, however, I contend that there is no trade secret even in the versions of EasyCount used for fee for service and industrial elections. In essence my position is that this material has no commercial value, or that the commercial value would not be diminished by its publication, or that the any advantage the AEC holds would not be diminished by publication. This is sufficient to deal with both claimed exemptions under s 47 of the FOI Act.

To explain my position it is necessary to differentiate the source code of a program (the instructions in a particular programming language) and the algorithm used by the program (the generic description of the way in which a result is achieved). Disclosure of the source code results in disclosure of the algorithm. However algorithms can be implemented in other languages once known.

As an example, the bubble sort algorithm is a well-known way of sorting a list of data. The algorithm is a way of doing things (an idea) which can be implemented in a range of programming languages.

The source code of computer programs is protected by the Copyright Act. The disclosure of source code under the FOI Act does not limit the applicability of copyright. Using or making copies of the source code, or creating an adaptation derived from the source code, would be an unlawful infringement of copyright.

On that basis no competitor could lawfully use any source code released under the FOI Act. For that reason the commercial value of the source code would be preserved and the advantage the AEC holds would not be diminished. For that reason the source code itself cannot constitute a trade secret or attract the protection of s 47(1)(b).

Algorithms do not attract the protection of copyright. Therefore an algorithm could attract the protection of s 47(1). To the extent that these algorithms are trade secrets (or commercially valuable) the release of source code may result in their disclosure and a loss of commercial advantage.

In order for these to be capable of being trade secrets they must be confidential. The algorithms used by EasyCount are not confidential. The algorithms used for various forms of industrial elections are all specified at http://www.aec.gov.au/About_AEC/AEC_Services/Industrial_Elections/voting.htm with sufficient detail to re-implement them. The Senate and House of Representatives electoral count algorithms are described at http://www.aec.gov.au/Voting/counting/index.htm and in the Commonwealth Electoral Act.

Any system implemented in EasyCount which is not so described is likely described algorithmically elsewhere.

Any system algorithmically described could be reproduced easily by any programmer. In accordance with Dais Studio Pty Ltd v Bullet Creative Pty Ltd [2007] FCA 2054 at [77]-[80] this is a relevant consideration to whether the material is capable of being a trade secret. Where it is easily reproduced it is not capable of being a trade secret. This operates in addition to the fact that the algorithms are not confidential.

In particular, because the algorithms are already known, their disclosure by the AEC cannot result in a loss of commercial value. They have no commercial value because they are not secret.

The only algorithms which could constitute trade secrets are those which count votes in a unique way that has never otherwise been publicly disclosed. I accept that such an algorithm could constitute a trade secret to the extent it was used in industrial or fee-for-service elections. However, if the counting method is broadly known, for example having been disclosed to a wide range of electors, this would diminish the degree of protection available.

Identical arguments apply to the disclosure of information about data structures representing votes and documentation describing the operation of the software.

To the extent that any of this argument fails, relevant portions of the documents should be excluded and an edited version of the requested documents provided under s 22 of the FOI Act.

Should you wish for any clarification or to discuss this please do not hesitate to contact me by reply email.

Yours faithfully,

Michael Cordover

Please use this email address for all replies to this request:

foi+request-435-87abdfce@righttoknow.org.au

Write your response as plain text. Only send PDF documents as a last resort. Government guidelines make it clear that PDF is not an acceptable format for you to use in the delivery of government information.

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Attachment E

MR ROGERS LETTER TO MR CORDOVER 9/12/2013

[See the Acrobat file *LS4883 Letter to M Cordover notifying decision 20131209.pdf* that is provided separately.]

Attachment F

REQUEST FOR IC REVIEW

[See the Acrobat file *LS4883 Internal Review Request.pdf* that is provided separately.]

EXTRACTS FROM THE COMMONWEALTH ELECTORAL ACT 1918

273A Computerised scrutiny of votes in Senate election

Determining election result

(5) The Australian Electoral Officer must then ascertain the successful candidates, and their order of election, by using a computer to apply the principles set out in subsections 273(8) to (32) (inclusive). A tie at any step in the process is to be resolved in the same way as a tie in the corresponding step is resolved under section 273.

273 Scrutiny of votes in Senate elections

(8) The number of first preference votes given for each candidate and the total number of all such votes shall be ascertained and a quota shall be determined by dividing the total number of first preference votes by 1 more than the number of candidates required to be elected and by increasing the quotient so obtained (disregarding any remainder) by 1, and any candidate who has received a number of first preference votes equal to or greater than the quota shall be elected.

(9) Unless all the vacancies have been filled, the number (if any) of votes in excess of the quota (in this section referred to as ***surplus votes***) of each elected candidate shall be transferred to the continuing candidates as follows:

(a) the number of surplus votes of the elected candidate shall be divided by the number of first preference votes received by the candidate and the resulting fraction shall be the transfer value;

(b) the total number of ballot papers of the elected candidate that express the first preference vote for that candidate and the next available preference for a particular continuing candidate shall be multiplied by the transfer value, the number so obtained (disregarding any fraction) shall be added to the number of first preference votes of the continuing candidate and all those ballot papers shall be transferred to the continuing candidate;

and any continuing candidate who has received a number of votes equal to or greater than the quota on the completion of any such transfer shall be elected.

(10) Unless all the vacancies have been filled, the surplus votes (if any) of any candidate elected under subsection (9), or elected subsequently under this subsection, shall be transferred to the continuing candidates in accordance with paragraphs (9)(a) and (b), and any continuing candidate who has received a number of votes equal to or greater than the quota on the completion of any such transfer shall be elected.

(11) Where a continuing candidate has received a number of votes equal to or greater than the quota on the completion of a transfer under subsection (9) or (10) of the surplus votes of a particular elected candidate, no votes of any other candidate shall be transferred to the continuing candidate.

(12) For the purposes of the application of paragraphs (9)(a) and (b) in relation to a transfer under subsection (10) or (14) of the surplus votes of an elected

candidate, each ballot paper of the elected candidate that was obtained by the candidate on a transfer under this section shall be dealt with as if any vote it expressed for the elected candidate were a first preference vote, as if the name of any other candidate previously elected or excluded had not been on the ballot paper and as if the numbers indicating subsequent preferences had been altered accordingly.

(13) Where, after the counting of first preference votes or the transfer of surplus votes (if any) of elected candidates, no candidate has, or fewer than the number of candidates required to be elected have, received a number of votes equal to the quota:

(a) the candidate who stands lowest in the poll must be excluded; or

(b) if a bulk exclusion of candidates may be effected under subsection (13A), those candidates must be excluded;

and the ballot papers of the excluded candidate or candidates must be distributed in accordance with subsection (13AA).

(13AA) Where a candidate is, or candidates are, excluded in accordance with this section, the ballot papers of the excluded candidate or candidates must be transferred as follows:

(a) the total number of ballot papers:

(i) expressing a first preference for an excluded candidate; or

(ii) received by an excluded candidate on distribution from another excluded candidate at a transfer value of 1 vote;

being ballot papers expressing the next available preference for a particular continuing candidate must be transferred at a transfer value of 1 vote to the continuing candidate and added to the number of votes of the continuing candidate;

(b) the total number (if any) of other ballot papers obtained by an excluded candidate or the excluded candidates, as the case may be, must be transferred beginning with the ballot papers received by that candidate or those candidates at the highest transfer value and ending with the ballot papers received at the lowest transfer value, as follows:

(i) the total number of ballot papers received by the excluded candidate or candidates, as the case may be, at a particular transfer value and expressing the next available preference for a particular continuing candidate must be multiplied by that transfer value;

(ii) the number so obtained (disregarding any fraction) must be added to the number of votes of the continuing candidate;

(iii) all those ballot papers must be transferred to the continuing candidate.

(13A) The procedure for a bulk exclusion, and the circumstances in which such an exclusion may be made, are as follows:

(a) a continuing candidate (in this subsection called Candidate A) shall be identified, if possible, who, of the continuing candidates who each have a number of notional votes equal to or greater than the vacancy shortfall, stands lower or lowest in the poll;

(b) a continuing candidate (in this subsection called Candidate B) shall be identified, if possible, who:

(i) stands lower in the poll than Candidate A, or if Candidate A cannot be identified, has a number of notional votes that is fewer than the vacancy shortfall;

(ii) has a number of notional votes that is fewer than the number of votes of the candidate standing immediately higher than him or her in the poll; and

(iii) if 2 or more candidates satisfy subparagraphs (i) and (ii)—is the candidate who of those candidates stands higher or highest in the poll;

(c) in a case where Candidate B has been identified and has a number of notional votes fewer than the leading shortfall—Candidate B and any other continuing candidates who stand lower in the poll than that candidate may be excluded in a bulk exclusion; and

(d) in a case where Candidate B has been identified and has a number of notional votes equal to or greater than the leading shortfall:

(i) a continuing candidate (in this subsection called ***Candidate C***) shall be identified who:

(A) has a number of notional votes that is fewer than the leading shortfall; and

(B) if 2 or more candidates satisfy sub-subparagraph (A)—is the candidate who of those candidates stands higher or highest in the poll; and

(ii) Candidate C and all other continuing candidates who stand lower in the poll than that candidate may be excluded in a bulk exclusion.

(13B) Where, apart from this subsection, the number of continuing candidates after a bulk exclusion under subsection (13A) would be fewer than the number of remaining unfilled vacancies, subsection (13A) shall operate to exclude only the number of candidates, beginning with the candidate who stands lowest in the poll, that would leave sufficient continuing candidates to fill the remaining unfilled vacancies.

(13C) Notwithstanding any other provision of this section (other than subsection (18)), where a candidate or candidates has or have been elected and there are surplus votes as a result of that election, paragraphs (13A)(a), (b), (c) and (d) may be applied as if references in those paragraphs to notional votes were references to adjusted notional votes.

(14) Any continuing candidate who has received a number of votes equal to or greater than the quota on the completion of a transfer under subsection (13) or (15) of ballot papers of an excluded candidate or candidates, as the case may be, shall be elected, and, unless all the vacancies have been filled, the surplus votes (if any) of the candidate so elected shall be transferred in accordance with paragraphs (9)(a) and (b), except that, where the candidate so elected is elected before all the ballot papers of the excluded candidate or candidates, as the case may be, have been transferred, the surplus votes (if any) of the candidate so elected shall not be transferred until the remaining ballot papers of the excluded candidate or candidates, as the case may be, have been transferred in accordance with paragraphs (13AA)(a) and (b) to continuing candidates.

(15) Subject to subsection (17) where, after the transfer of all of the ballot papers of an excluded candidate or the excluded candidates, as the case may be, no continuing candidate has received a number of votes greater than the quota:

(a) the continuing candidate who stands lowest in the poll must be excluded; or

(b) if a bulk exclusion of candidates may be effected under subsection (13A), those candidates must be excluded;

and the ballot papers of the excluded candidate or candidates must be transferred in accordance with subsection (13AA).

(16) Where a candidate is elected during a transfer of ballot papers under subsection (13) or (15), no other ballot papers of an excluded candidate or candidates, as the case may be, shall be transferred to the candidate so elected.

(17) In respect of the last vacancy for which two continuing candidates remain, the continuing candidate who has the larger number of votes shall be elected notwithstanding that that number is below the quota, and if those candidates have an equal number of votes the Australian Electoral Officer for the State shall have a casting vote but shall not otherwise vote at the election.

(18) Notwithstanding any other provision of this section, where the number of continuing candidates is equal to the number of remaining unfilled vacancies, those candidates shall be elected.

(19) At the conclusion of the scrutiny, the Australian Electoral Officer shall place in parcels all the ballot papers transmitted to the officer under subsection (5), seal up the parcels and indorse on each parcel a description of the contents thereof.

(20) For the purposes of this Act and the *Representation Act 1983*:

(a) the order of election of candidates in a Senate election shall be taken to be in accordance with the order of the count as a result of which they were elected, the candidates (if any) elected on the count of first preference votes being taken to be the earliest elected; and

(b) where 2 or more candidates are elected as a result of the same count, the order in which they shall be taken to have been elected shall be in accordance with the relative numbers of their votes, the candidate with the largest number of votes being taken to be the earliest elected,

but if any 2 or more of those candidates each have the same number of votes, the order in which they shall be taken to have been elected shall be taken to be in accordance with the relative numbers of their votes at the last count before their election at which each of them had a different number of votes, the candidate with the largest number of votes at that count being taken to be the earliest elected, and if there has been no such count the Australian Electoral Officer for the State shall determine the order in which they shall be taken to have been elected.

(21) Subject to subsections (22) and (23), where, after any count under this section, 2 or more candidates have surplus votes, the order of any transfers of the surplus votes of those candidates shall be in accordance with the relative sizes of the surpluses, the largest surplus being transferred first.

(22) Subject to subsection (23), where, after any count under this section, 2 or more candidates have equal surpluses, the order of any transfers of the surplus votes of those candidates shall be in accordance with the relative numbers of votes of those candidates at the last count at which each of those candidates had a different number of votes, the surplus of the candidate with the largest number of votes at that count being transferred first, but if there has been no such count the Australian Electoral Officer for the State shall determine the order in which the surpluses shall be dealt with.

(23) Where, after any count under this section, a candidate obtains surplus votes, those surplus votes shall not be transferred before the transfer of any surplus votes obtained by any other candidate on an earlier count.

(25) Where a candidate is elected by reason that the number of first preference votes received by the candidate, or the aggregate of first preference votes received by the candidate and all other votes obtained by the candidate on transfers under this section, is equal to the quota, all the ballot papers expressing those votes shall be set aside as finally dealt with.

(26) A ballot paper shall be set aside as exhausted where on a transfer it is found that the paper expresses no preference for any continuing candidate.

(27) In any case to which subsection 239(4) applies, a vote indicated on a ballot paper opposite the name of a deceased candidate shall be counted to the candidate next in the order of the voter's preference, and the numbers indicating subsequent preferences shall be deemed to be altered accordingly.

(28) For the purposes of this section:

(a) a transfer under subsection (9), (10) or (14) of all the surplus votes of an elected candidate;

(b) a transfer under paragraph (13AA)(a) of all ballot papers of an excluded candidate or excluded candidates, received by that candidate, or one of those candidates:

(i) as the first preference vote; or

(ii) on distribution from another excluded candidate at a transfer value of 1 vote; or

(c) a transfer under paragraph (13AA)(b) of all ballot papers received by the excluded candidate or candidates, as the case may be, at a particular transfer value;

each constitutes a separate transfer.

(29) In this section:

adjusted notional vote, in relation to a continuing candidate, means, in a case where a candidate or candidates has or have been elected, the sum of:

(a) the number of notional votes of the continuing candidate; and

(b) the number, before the transfer of any of the surplus votes, of those surplus votes.

continuing candidate means a candidate not already elected or excluded from the count.

leading shortfall, in relation to a particular stage during the scrutiny in a Senate election, means the shortfall of the continuing candidate standing highest in the poll at that stage.

notional vote, in relation to a continuing candidate, means the aggregate of the votes obtained by that candidate and the votes obtained by each other candidate who stands lower in the poll than him or her.

shortfall, in relation to a continuing candidate at a particular stage during the scrutiny in a Senate election, means the number of votes that the candidate requires at that stage in order to reach the quota referred to in subsection (8).

State includes Territory.

vacancy shortfall, in relation to a particular stage during the scrutiny in a Senate election, means the aggregate of the shortfalls of that number of leading candidates equal to the number of remaining unfilled vacancies, the leading candidates being ascertained by taking the continuing candidate who stands highest in the poll, the continuing candidate who stands next highest in the poll, and so on in the order in which the continuing candidates stand in the poll.

(30) In this section, a reference to votes, or ballot papers, as the case may be, of or obtained or received by a candidate includes votes, or ballot papers, as the case may be, obtained or received by the candidate on any transfer under this section.

(31) For the purposes of this section, at any time after the counting of first preference votes the order of standing of the continuing candidates in the poll shall be determined as follows:

(a) subject to paragraph (b), the continuing candidates shall stand in the poll in the order of the relative number of votes of each continuing candidate, with the continuing candidate with the greatest number of votes standing highest in the poll and the continuing candidate with the fewest number of votes standing lowest in the poll;

(b) if 2 or more continuing candidates have the same number of votes, those candidates shall stand in the poll in the order of the relative number of votes of each of those candidates at the last count at which each of them had a different number of votes, with the continuing candidate with the greater or greatest number of votes at that count standing higher in the poll and the continuing candidate with the fewer or fewest number of votes at that count standing lower in the poll, but if there has been no such count the Australian Electoral Officer for the State shall determine the order of standing of those candidates in the poll.

(32) When the last vacancy is filled, the scrutiny shall immediately cease and any exclusion in progress shall not be completed.