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Census timeline

This timeline shows a series of events leading to what has been dubbed #censusfail – the 2016 Australian census. The intent of this piece is to reflect on the history of the census to consider if alternate pathways could have been taken.

The data was gathered from a range of media sources and the Australian Bureau of Statistics.

DATE	BUREAU OF STATISTICS	GOVERNMENT	COMMUNITY	TECHNICAL
1966				**Computer processing of census begins** Australian Bureau of Statistics
1967 CENSUS YEAR		**Referendum to include Indigenous people in population estimates** In a referendum in 1967, Australians voted overwhelmingly to amend the Constitution to remove sections discriminating against Indigenous and Torres Strait Islander people. More than 90% of Australians voted "yes". Australian Bureau of Statistics		

1 PRIVACY
What if more time was spent understanding the privacy concerns of the public?

DATE	BUREAU OF STATISTICS	GOVERNMENT	COMMUNITY	TECHNICAL
1975		**Publicity campaign around privacy is cut** A Law Reform Commission study recommends ABS undertake a publicity campaign to alleviate privacy concerns. Budget cuts to the ABS meant it could not go ahead. There was much negative media afterwards, including discussions of whether names were really needed on the census form. Australian Bureau of Statistics	**New questions fuel public debate on privacy** New questions around income, disability, and race fueled public concerns around the privacy of information provided in the census. The public also questioned the need for all questions to be compulsory. Australian Bureau of Statistics	
1976 CENSUS YEAR	**Name-identified forms destroyed after data entry** As for the previous year, after the data was entered to the computers, the name-identified forms were destroyed (usually within 18 months). Prior to 1971, forms were kept for a limited time in case cross checking was required. Australian Government	**Census only part processed due to budget cuts** Fraser government budget cuts mean the 1976 census only has age, sex, marital status and birthplace processed for all people. Only half of the remaining census papers were processed for the other topics. Australian Bureau of Statistics		
1980			**Public asked to suggest topics for inclusion** For the first time, the public were asked to submit topic ideas for the next census. The ABS received over 1600 suggestions. Australian Bureau of Statistics	
1986	**Census data released via CD ROM** Australian Bureau of Statistics			

2 PRIVACY
What if name retention remained optional in 2016 as in previous years?

DATE	BUREAU OF STATISTICS	GOVERNMENT	COMMUNITY	TECHNICAL
2001 CENSUS YEAR			**52% of the public opt to have name retained for "posterity"** Name retention was optional from 2001 to 2011. A publicity campaign used the word "posterity" to describe why people might want to do this as a research had shown that without consent, public confidence in the ABS would be seriously eroded. Australian Bureau of Statistics	
			70,000 people say religion is 'Jedi Knight' A worldwide campaign encourages people to put their religion as 'Jedi Knight'. The campaign ultimately failed as the ABS recorded their response as 'religion – inadequately described.' Australian Bureau of Statistics	

DATE	BUREAU OF STATISTICS	GOVERNMENT	COMMUNITY	TECHNICAL
2005	**Privacy report rejects permanent name linking** An independent consulting firm recommends that the ABS should not link names to data permanently. The report says that although the risk of privacy breaches may be small, the subjective judgment of this risk may result in the quality of the data being questioned. Australian Bureau of Statistics			
2006 CENSUS YEAR			**56% opt to have their name retained from census** The final question on the census asked people if they wanted to have their name retained by the Australian Archives before being released in 99 years. Australian Bureau of Statistics	**10% of households complete the 2006 census online** Australian Bureau of Statistics
2008	**Trust in the ABS begins to wane after funding cuts** A drive for efficiency under PM Kevin Rudd in 2008 saw funding to the ABS cut. August's Job Vacancy Survey was cut, meaning there is a gap in employment data "just as the global financial crisis was about to hit". Trust in the ABS was eroded. The Guardian			

3 SYSTEM DESIGN
What if denial of service attacks had been considered in the system design?

DATE	BUREAU OF STATISTICS	GOVERNMENT	COMMUNITY	TECHNICAL
2010			**Survey finds 91% of community trust the ABS** For the first time the ABS commissioned research to understand the trust that the general public and experts have in the institution and in official statistics. The response rate was very low (26%) and, as a result, the ABS advise that findings should be interpreted with caution. ABS Survey.	**ABS announces it will end arrangement with IBM** Increasing concerns about privacy breaches led the ABS to announce in 2010 that the next census would be hosted in house rather than with IBM. news.com.au
2011 CENSUS YEAR	**Media campaign helps to spread load on servers** To help smooth the load on IBM's servers, the ABS had a marketing campaign to let people know they could fill out the census at any time during the census period. This differs from the media campaign messages and information on census materials in 2016. News.com.au	**NSW Gov warned Denial of Service attacks to online voting could be domestic** A security consultancy warns the NSW State government that Denial of Service (DDoS) attacks on e-voting are likely to come from inside Australia, not just from overseas. DDoS attacks are when multiple systems flood the bandwidth of a web service and make it unavailable. CSC report.	**60% opt to have their name retained** For the third time, the public was offered the chance to have their name retained. An increase from the first census where name retention was offered. National Archives	**28% of households fill out 2011 census online** The survey was hosted by IBM at their Baulkham Hills site. It was designed to handle a peak of 120 submissions per second. News.com.au
2012			**Focus groups conducted around data retention** Colmar Brunton conducts 16 focus groups on behalf of the ABS to explore public perceptions of personal information. A recurring key concern across the groups was "identified data being shared or sold to those who would use this for either illegal or marketing purposes". Colmar Brunton	
			Significant increase in topic suggestions on religion The call for topic submissions for questions to include in the 2016 census went out in late 2012. Suggestions on religious affiliation went from six in 2012 (out of 45 suggestions) to 444 in 2016 (out of 870). The issues raised were very similar, mostly to do with previous wording which seemed to imply that everyone has a religion. Australian Bureau of Statistics	
2013		**QLD Gov blacklists IBM from any future contracts** A flawed payroll system for Queensland Health built by IBM in 2010, results in thousands of errors and ends up costing $1.2 billion (original cost $6.19 million). The Australian	**Australians becoming more concerned over online privacy** OIAC report finds that Australians are becoming more concerned with online privacy. It was reported that 96% of those surveyed fely they should be more informed about how their information is handled and protected. Office of the Australian Information Commissioner	
2014	**Brian Pink the head statistician retires** In the final annual report under Pink's watch, the department warned that the ABS barely had enough cash "to keep the lights on". smh.com.au			
2014 March	**ABS changes employment survey methodology** Significant changes by the ABS to the monthly survey of people employed means that figures for February of this year (at least) cannot be trusted. theguardian.com			
2014 June	**ABS cuts number of surveys to reduce costs** The ABS announces it will cut a number of surveys in order to reduce its spending by $50m over three years. ABS media release			

2014 November

4 LEADERSHIP
What if there had been a department head for the entirety of 2014?

IBM wins contract to host the 2016 Census
Despite having said in 2010 that IBM would no longer host the census they are awarded a $9.6million contract. The ABS said "due to the peak volume of the online form during Census 2016 it was decided that contracting IBM would provide the best value for money and management of operational risk." Intermedium

2014 December

David Kalisch begins as Head Statistician
Mr Kalisch did not begin his tenure as head statistician until the end of 2014 (Canberra Times). The acting head of department, Jonathan Palmer, was responsible in this time for the approval of large tenders ($9.6million to IBM) as well as associated technology tests (ABS).

2015

ABS asks to move to a 10 yearly census
The ABS asks government to legislate that the census go ahead every 10 rather than every 5 years. This draws widespread criticism.
smh.com.au

GOVERNMENT

COMMUNITY

TECHNICAL

2015 May

BUREAU OF STATISTICS

Increase to ABS budget for systems upgrade
The 2015-16 budget saw the government increase in funding to the ABS for "critical systems upgrades" as well as allowing the ABS to "explore new sources of revenue from commercial and sophisticated users of data." abs.gov.au

2015 July

5 COMMUNICATION
What if the word 'posterity' was listed as a core benefit (as it had been in 2001) rather than 'statistical efficiency?

ABS tenders for data management systems
Having said in May of 2015 that most of their systems are unreliable because of outdated technology, the ABS puts out to tender for a Enterprise Data Management Environment (EDME) and related services. Intermedium

2015 August

First publication of intent to retain names
The ABS releases their regular report into the nature of the upcoming census. The intent to retain names is mentioned in the report (linked below), yet no mention is made of how long they will be retained for, nor is this stated in the associated media release. The media barely reports this. abs.gov.au

2015 October

Decision to conduct internal privacy assessment
At a meeting on October 19, the ABS decides that rather than putting the name retention idea to the public, the ABS conducts a more private assessment process.
smh.com.au

81% of the general community trust the ABS
142 informed users of ABS statistics and 2,200 members of the general community participated in research, the second survey in the history of the ABS. The survey found that 76% of informed users and 81% of the general community say they have institutional trust in the ABS. ABS Survey.

Kalisch makes no mention of compulsory name retention in senate hearing
Two days following the decision to run a privacy assessment on retaining names, Kalisch fronts a senate committee hearing and says that name retention would be "for those who opt in" as it had been in previous years. Transcript

2015 December

ABS responds to Privacy Assessment and uses jargon to outline benefits
In a media release barely picked up by mainstream media, the ABS says that the Privacy Assessment reported very low risks to privacy from retaining names. The benefits they list are "for the purpose of richer and more dynamic statistics and more efficient statistical operations". ABS

Denial of Service attacks not specified as part of load testing simulations
Revolution IT receives $325,000 in December for licenses to complete load testing on the 2016 census website. news.com.au. Revolution IT says it was not asked to include simulation of DDoS attacks in their performance testing. Revolution IT website.

2016

Head of 2016 census says it's at risk of critical failure
In an internal memo, the head of the 2016 census, Duncan Young, says that the census is at risk of critical failure. According to Peter Martin at smh.com.au, Young's memo stated that one way to save money was to ask fewer questions or to reach fewer people.

2016 March

BUREAU OF STATISTICS

GOVERNMENT

Media begins to report name retention story
Despite the ABS announcing in late 2015, it is not until March that the media and the public begin to pick up on the compulsory and indefinite name retention policy for the 2016 census.
abc.net.au

TECHNICAL

2016 April

Decision to keep names for four years rather than indefinitely
Public pressure forces the ABS to back down on their decision to indefinitely keep names. They instead decided to keep the linkage keys created for them, perhaps forever. This is a technical detail most of the public cannot understand. smh.com.au

Government releases cyber security strategy
On release of its cyber security strategy, the government admits that department systems have been subject to cyber attacks. According to ABC's Four Corners program, this was the first time that the government had admitted it was the victim of such attacks. Cyber Security Strategy

COMMUNITY

2016 May

Load testing of website includes allowance for peaks in access
Revolution IT conducts further load testing including load balancing, saying on their website that simulations allowed "for sufficient peak head room as specified by the ABS". Later media criticism would focus on insufficient load balancing capabilities. eftm.com.au

2016 July

Kalisch responds publicly to privacy concerns
In an opinion piece for the SMH, the head of the ABS urges Australians to fill out the census. Collection of names is pitched as being "for statistical purposes only, and will increase the value of census data". He also emphasised the safety of the data.
smh.com.au

McCormack appointed as minister responsible
After a period where no minister was responsible for the ABS (Hawke's position had been abolished according to the SMH), Michael McCormack is appointed as minister for small business which includes responsibilities for the ABS.

Households receive logins but no mention of dates for completing the census
Letters sent out to households with login details do not include the September 23 deadline date, meaning many people assume they can only access the census website on August 9.

2016 August

Xenophon and other senators vow to leave names off the census
Despite threats of a $180 a day fine, senators including Nick Xenophon and Scott Ludlam say privacy concerns are too great to provide names. They are joined by former ABS chief Bill McLennan and NSW Privacy Commissioner Elizabeth Coombs.
smh.com.au

Census lines jam as more people request paper form than expected
ABS chief says that the ABS hotline was receiving more calls than expected to get help filling out the form online or to request a paper one. abc.net.au

CENSUS DAY

McCormack says census 'no worse than Facebook'
The minister responsible for the ABS, in the job for less than a month, says on census day that the public should not be concerned about online privacy of the census as it is "no worse than Facebook".
smh.com.au

65% of Australians expected to submit online
On census day, an ABS representative says they expect 16.5 million people to submit their census form online and that the system had been load tested to 150% of what they expected to be on it.
news.com.au

7:00pm

Turnbull tweets he has completed online census
"We filled in the @ABSCensus tonight online - v easy to do. And so important for planning better Govt services & investment for the future". Twitter

Public begins reporting via Twitter of inability to access the census site

Census site subject to denial of service attacks
ABS media release says that they were attacked four times in "varying nature and severity". Initial reports do not specify whether these attacks were domestic or from sources outside Australia, and some question whether these attacks occurred at all or whether the website failed due to poor planning. theregister.co.uk

7:30pm

BUREAU OF STATISTICS

GOVERNMENT

COMMUNITY

System outage on census website is not immediately reported

8:38pm

ABS tweets about system outage
"The ABS & Census websites are currently experiencing an outage. We're working to restore the service. We will keep you updated. Thank you." The bureau also uses Twitter to assure people they "have plenty of time" to complete. Twitter

TECHNICAL

11:00pm

ABS says website will be out of action for the night
According to ABS the website did not fail. It was taken offline due to security concerns. Over 2 million forms were successfully submitted before the shutdown. abs.gov.au

Census site completely shutdown

AUG 10

6 SYSTEM DESIGN
What if people had been asked to access the site at different times to better balance load on the site?

Media release reports a 'confluence of events' responsible for site shutdown
In a reasonably technical post, the ABS explains the series of events which led to the shutdown. They say that "no data was compromised", but the combination of four Denial of Service attacks, a large increase in traffic, hardware failure from router overloaded, and a false alarm in system monitoring. abs.gov.au

People still trying to access and worried about consequences
Many people still unaware they have until September 23 to complete and return their census form.

AUG 11

Turnbull orders inquiry and blames the ABS
Staff from the ABS not impressed that the Prime Minister criticised them for the census failings, citing budget cuts and government decisions as the real failing. delimiter.com.au

Website restored but many still cannot access
Technical difficulties mean many cannot access the site as the DNS responsible may be timing out and subsequently mistaking each access as being from outside Australia.
The Conversation.

AUG 12-13

7 SYSTEM DESIGN
What if before the census went to tender there'd been a 'Hackfest' to better understand technical requirements?

Two uni students create a robust census site over 54 hours for $500
Two students from the Queensland University of Technology team up at a 'hackfest' to build and load test an alternate census site which they call 'Make Census Great Again'. eftm.com.au