



Australian Government

Department of Communications and the Arts



Review of Australia's .au domain management

Discussion paper

November 2017

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Introduction

On 19 October 2017 the Minister for Communications, Senator the Hon Mitch Fifield, announced a review of Australia’s management of the .au domain. The .au Domain Administration (auDA) oversees the operation and management framework of the .au domain. auDA is endorsed by the Australian Government as the appropriate entity to administer Australia’s country code top-level domain (ccTLD)—the .au domain—on behalf of Australian internet users. The terms of this endorsement were established in 2000. auDA is recognised by the Internet Corporation for Assigned Names and Numbers (ICANN) as the manager of the .au ccTLD.

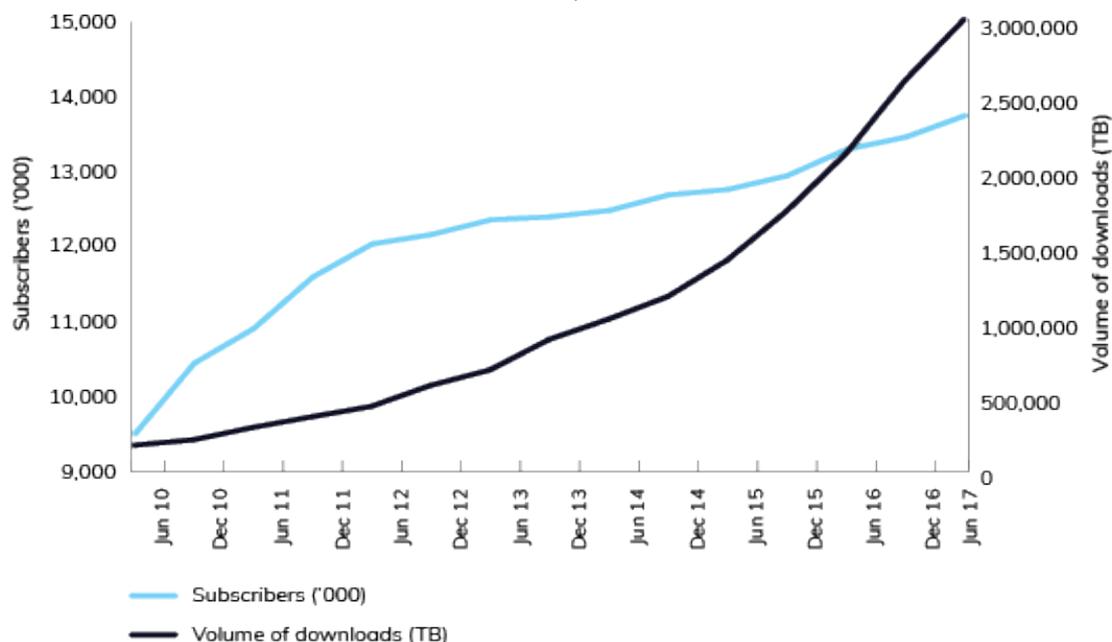
The purpose of this review is to ensure that the management framework of auDA remains fit for purpose and the .au domain is serving the needs of the online Australian community. Consideration of auDA’s governance arrangements and an assessment of the terms of endorsement will help determine whether Australia’s top-level domain, .au, is being managed consistent with Government and community expectations.

The review will be undertaken by the Department of Communications and the Arts. The review is expected to be finalised by early 2018.

Why a review?

There have been significant changes to the digital landscape since auDA was first established. In this time, the internet has become integral to the economy and society as a whole. Australian individuals and businesses use the internet daily for a wide range of activities. As indicated in the figure below, in June 2017 there were 13.7 million internet subscribers in Australia, who in the previous quarter downloaded three million terabytes of data.

Figure 1: Number of subscribers and volume of downloads, 2010 to 2017



Source: Australian Bureau of Statistics, June 2017, [8153.0—Internet Activity, Australia](#).

Additionally, in the year that ended 30 June 2016, the proportion of Australian businesses that received orders by the internet was 37 per cent, with these transactions worth an estimated \$321 billion.¹ In this regard, the .au ccTLD is an increasingly important piece of Australian infrastructure.

The Domain Name System (DNS) environment is also very different from when ICANN delegated management of the .au ccTLD to auDA. There is significantly more choice available to Australian individuals, organisations and businesses considering registering a website. In the past there were only a handful of publicly available generic top level domains (TLDs)—.com, .net and .org—however, this number has expanded and there are now some 1,200 generic TLDs. In practice, this shows that the way Australians interact with domain names has changed significantly since auDA was first established.

As the level of reliance on the internet increases, the impact of malicious activity has also risen. Cyberattacks in Australia are increasing in terms of scale and complexity. Appropriate strategies and frameworks are required to make sure that the .au ccTLD remains secure and that risks are well managed.

Terms of reference

The review will examine and make recommendations on:

- the most appropriate framework for the management of the .au top level domain
- how to ensure that Government and community expectations inform auDA's operation and decision-making
- mitigation strategies to address future risks to the security and stability of .au.

In keeping with the Australian Government's commitment to the multi-stakeholder approach to internet governance, the review will involve public consultation to seek industry and community views on best practice approaches and processes for the management of .au to ensure that the governance structure is fit for purpose.

Full Terms of Reference are available on the Department's website at www.communications.gov.au/documents/terms-reference-review-au-domain-administration.

The review will examine and make recommendations consistent with the review's terms of reference. Following the conclusion of the consultation phase, the review will consider options including timeframes for implementing its recommendations.

Structure of this paper

This paper has four areas of discussion:

- auDA roles and responsibilities
- Governance and management
- Stakeholder engagement
- Future risks to the security and stability of .au.

In developing this paper, consideration has been given to publically-available documents on the auDA website, international trends and developments, and best practice guidelines.

A summary of all questions is provided at **Attachment A**.

¹ Australian Bureau of Statistics, June 2016, [8166.0 – Summary of IT use and innovation in Australian business, 2015-16](#).

Background

Internet Governance

The DNS is integral to information being found on the internet. Without DNS people would have to remember an Internet Protocol address—a string of numbers and dots—in order to access a website. DNS is a hierarchical system with each ‘dot’ in a domain name representing a new level in the hierarchy. ICANN, a United States-based non-profit organisation established in 1998, provides technical coordination of the internet and is responsible for DNS coordination at a global level. ICANN delegates DNS administration within countries to separate entities.

While the private sector owns and operates much of the global internet’s infrastructure, ICANN’s governance is based on a multi-stakeholder model. The private sector, the internet technical community, members of the public and governments contribute to discussions on the management of key internet resources.

History of auDA

Dr Jon Postel, University of Southern California, registered the .au country-code top level domain (ccTLD) for Australia in March 1986, and delegated its administration to Mr Robert Elz, a network programmer at Melbourne University. Mr Elz created the second level DNS structure for .au—including .com.au, .net.au, .org.au, .edu.au and .gov.au—and created policies for their use.

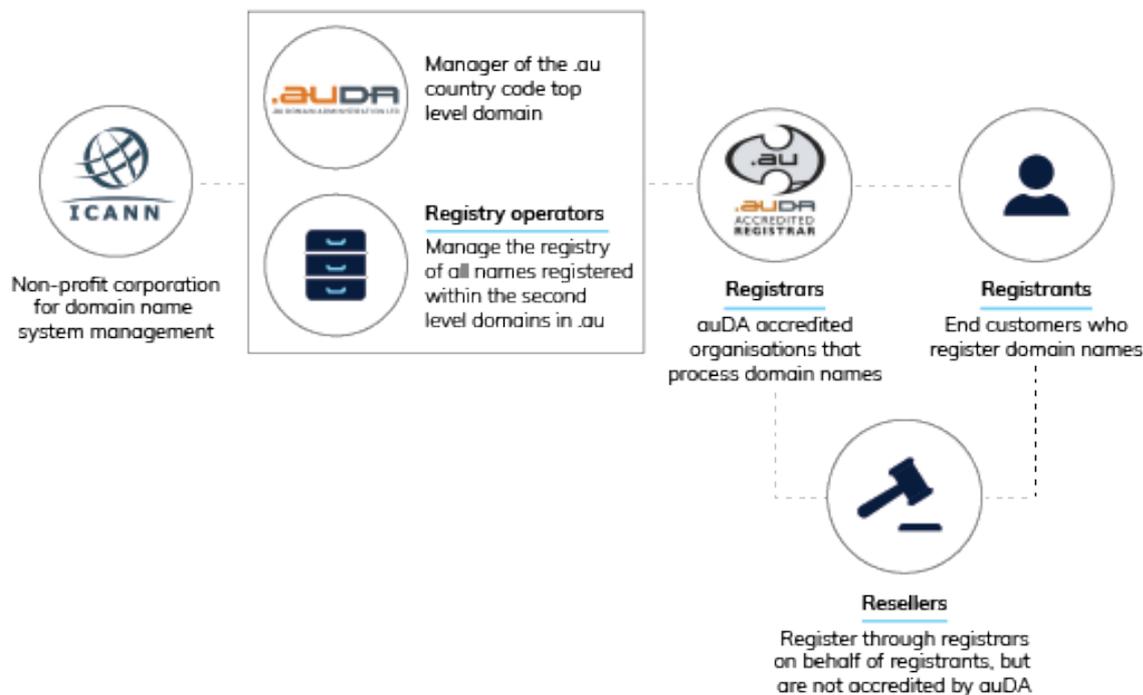
As the number of Australian websites grew, .au domain administration became too great a task for an individual. In 1997 local internet stakeholders established the Australian Domain Name Administration (ADNA) to develop policies for the administration of internet domain names within the .au name space, and provide a competitive market in domain names for the Australian business sector. The Australian Government became involved in 1999 following ADNA’s request for assistance. The Australian Government agreed to help establish a member-based, self-regulatory regime to take over the management of the .au domain, and ADNA was reconstituted as auDA. On 25 October 2001, ICANN and auDA entered into a ccTLD Sponsorship Agreement² under which management of the .au ccTLD was delegated to auDA.

auDA is a not-for-profit company limited by guarantee under the *Corporations Act 2001*, and hence is subject to Australian Securities and Investment Commission supervision. auDA is responsible for setting policies for the operation of the .au ccTLD, and ensuring that it remains stable and secure.

² ICANN, 25 October 2001, [.au ccTLD Sponsorship Agreement](#).

As the manager of the .au ccTLD, auDA maintains the database of second level domains within .au, and manages the .au top level domain name service. Registry services for second level domains are provided by a third party under contract with auDA. The diagram below illustrates the main functions of the parties involved in the domain registry process:

Figure 2: Domain registry participants' functions



Source: ICANN, 2017, [Domain name registry process](#).

auDA's relationship with the Australian Government

The Australian Government endorsed auDA in 2000 and 2001 as the appropriate entity to administer the .au domain on behalf of Australian internet users as part of a self-regulatory regime. As part of this endorsement, and given that the DNS is a public resource in the sense that its functions must be administered in the public or common interest, auDA's management and administration of the .au ccTLD is subject to the ultimate authority of the Commonwealth.

The Government's expectations of auDA for the management of .au were set out by the then Minister for Communications in a number of letters. They include that auDA should:

- operate within the provisions of its company constitution
- recognise that the internet naming system is a public resource
- operate as a fully self-funding and not-for-profit organisation
- be inclusive of and accountable to all members of the Australian internet community
- adopt open, transparent and consultative processes
- promote competition, fair trading and provisions for consumer protection and support
- establish appropriate dispute resolution mechanisms, and
- represent Australian internet industry interests in the internet domain name system at national and international fora.

These conditions are often referred to as the Government's terms of endorsement of auDA. The terms of endorsement are available from the ICANN-affiliated [Internet Assigned Numbers Authority](#) website.

At the same time as endorsing auDA, the Government legislated to create reserve powers under the *Telecommunications Act 1997* (Telco Act) and the *Australian Communications and Media Authority Act 2005* (ACMA Act) to provide for intervention in the event that a self-regulatory body was unable to manage electronic addressing in an effective manner.

Issues

auDA roles and responsibilities

A starting point for the review is to understand and assess the primary roles and responsibilities of auDA in the context of contemporary expectations. This will help inform an appropriate framework for management of the .au top level domain.

The Government's expectations of auDA for the management of .au are set out in the terms of endorsement (described above). These terms of endorsement are guiding and general in nature and do not go to the particulars of auDA's roles and responsibilities in relation to domain management within the .au ccTLD.

auDA's 2015-16 Annual Report describes the core elements of auDA's role as:

- developing and reviewing .au policies
- enabling and enforcing regulatory compliance
- maximising the security and technical stability of the .au space
- facilitating competition and consumer choice through the accreditation of .au registrars
- engaging and educating .au stakeholders and the broader community
- protecting consumer safeguards and providing effective dispute resolution mechanisms.

Further articulation of auDA's purpose, activities and strategic priorities are described in the auDA Constitution, its Strategic Plan 2015-18 and Director's reports, all of which are available on the auDA website.

Since the formation of auDA, there have been significant changes in the digital landscape with developments in digital technologies producing significant economy-wide change, particularly over the past decade. These technological developments and other global trends may affect how internet resources are used in the future (including potentially the DNS and domain registration).

Questions

auDA's roles and responsibilities

1. What are auDA's primary roles and responsibilities?
2. Do the current terms of endorsement set out appropriate guiding principles for a fit for purpose .au ccTLD manager?
3. Do the terms of endorsement reflect community expectations for the management of the .au ccTLD?
4. What external trends and developments may affect auDA's roles and responsibilities?

Governance and management

The review will consider best practice approaches and processes for the management of .au to ensure that the governance structure is fit for purpose.

auDA's Board has been established to reflect the structure of its membership, with supply and demand class members, and the addition of independent directors who are not associated with auDA. As stated in its Constitution, auDA's Board is comprised of:

- the CEO of auDA as a non-voting member of the board
- four Directors elected by the Supply Class Members
- four Directors elected by the Demand Class Members
- up to three Independent Directors appointed by the elected Directors, for terms not exceeding two years.

auDA's Constitution sets out the rules governing the relationship between, and activities of, the company, its directors and members. As a company limited by guarantee, auDA is also subject to the requirements of the *Corporations Act 2001*.

While auDA receives its endorsement from the Government, it differs from public sector organisations such as Government Business Enterprises. These entities must comply with the *Public Governance, Performance and Accountability Act 2013* (PGPA Act) which provides a template for corporate governance. The PGPA Act outlines appropriate board and corporate governance, financial governance and planning and reporting.³

The 2016 Cameron Ralph Khoury review of auDA's governance stated that a key imperative for auDA was to modernise governance rules and processes to ensure that the framework of its Constitution and rules can meet modern governance arrangements. The review also recommended the process of transformation could commence with the Board working '...to adopt the ASX good governance principles to the extent practicable within the current Constitution and Rules.'

There are a number of organisations providing recommendations on best practice corporate governance. These provide a general foundation across common themes that can support an organisation's strategic objectives or in auDA's case, its terms of endorsement.

Table 1: Best practice corporate governance themes

Theme	Analysis
Strategic objectives	An organisation's strategic objectives should be clearly articulated. The board should communicate its purpose and vision, its authority and its remit, so the organisation and shareholders understand it is working in the best interests of the whole.
Board qualifications/structure	An effective board provides direction and adds value to an organisation. A board's composition should contain a mix of skills, background and industry experience in order to contribute to the organisation's strategic objectives.
Strategic risk	Identifying and managing risks to an organisation, including from innovation and market disruption, is a key responsibility of board directors. A board should be proactive in establishing a risk management framework and reviewing its effectiveness.

³ Department of Finance, September 2017, [Government Business Enterprises \(GBEs\)](#).

Theme	Analysis
Ethics and culture	An organisation should have an ingrained ethical behaviour and a good corporate culture. The board plays an important role in shaping organisational culture and should demonstrate ethical behaviour, acting responsibly and reflecting high standards of behaviour. It should adopt a directors' code of ethical conduct with strategies for managing conflict of interest.
Governance processes	An organisation should have an effective governance framework for management and oversight. A board should articulate organisational roles, delegations and responsibilities, and report against performance indicators. The governance framework should include transparency and accountability to stakeholders in its reporting mechanisms.
Stakeholder accountability	A board should act with integrity to the benefit of its stakeholders and the long-term interests of the organisation. Stakeholders should be treated equally with their rights and obligations clearly defined, as should board responsibilities in terms of its accountability and transparency. Robust reporting, development and audit procedures will assist in ensuring a board is accountable and provide stakeholders with an opportunity to comment on governance.

Sources: [Australian Charities and Not-for-Profit Commission](#); [International Corporate Governance Network](#); [Australian Institute of Company Directors](#); [ASX Corporate Governance Council](#); [Governance Institute of Australia](#); [Department of Finance Resource Management Guide No.126](#); [ASIC's internal governance](#)

Questions

Corporate governance

5. What best practice approaches and processes should be considered with regard to auDA corporate governance?
6. What does good corporate governance for auDA look like? Are the ASX corporate governance principles sufficient? Should other principles also be considered?
7. Should reform of existing auDA corporate governance arrangements be considered? If so, what are the reform priorities?
8. Do the current board arrangements support auDA in effectively delivering its roles and responsibilities?
9. Should reform of existing board arrangements be considered? If so, what are the reform priorities?

Stakeholder engagement

The Australian Government is committed to the multi-stakeholder model of internet governance. The review is interested in understanding who auDA's stakeholders are, and what is the best process for stakeholder engagement. The review recognises that members are important auDA stakeholders.

auDA's terms of endorsement note that as the DNS is a public resource, its functions should be administered in the public or common interest. In terms of its stakeholders, it could be said that given the internet has become essential to Australians' daily lives, auDA's stakeholders include all Australians using .au domains to do their banking, using social media and online retail, and other online activities. auDA's Constitution reflects the terms of endorsement, noting the 'Australian internet community' is defined as 'users and suppliers of services via the internet in Australia'.

auDA's members are integral to the company being a successful entity. There are two classes of auDA membership:

- **Supply Class:** for domain name industry participants (registry operators, registrars and resellers)
- **Demand Class:** any legal person that does not qualify for supply class, including domain name holders (registrants), internet users and the general public

Other auDA stakeholders include: accredited and potential registrars that are not members; non-member domain name registrants; internet service providers; web hosting companies; email providers and corporations that operate DNS infrastructure; the Australian Government; the Australian and global internet communities; and those engaging with its community programs.

In 2011, auDA commissioned Westlake Consulting Ltd to conduct an independent review into the governance of .au. One of the recommendations was for auDA to produce an Accountability and Transparency Framework broadly similar to ICANN. A draft Framework was produced in 2012.⁴

The Framework notes in terms of its accountability auDA has:

- a legal and constitutional accountability as an Australian company
- public sphere accountability as a manager of a vital national resource
- accountability to its members, following on from its structure as a membership-based entity.

The Constitution notes members can:

- take part in the Annual General Meeting (AGM)
- vote for or stand as a Director
- have financial statements available
- vote on resolutions put to members.

The Framework's section on transparency notes accountability only works if there is 'sufficient information to make informed judgements'. It commits auDA to publishing information to provide 'sufficient levels of transparency to allow members and other stakeholders to understand the work that auDA is undertaking in the light of its accountabilities'. This information includes Board agendas, Board minutes, and Board committee minutes.

The Board made the decision in May 2017 to remove minutes from the auDA website, stating publishing was 'not best practice governance'.⁵ These were subsequently restored following the Special General Meeting in July.⁶

The Framework commits to involving members and other stakeholders in policy development processes, with advisory board minutes to be published on the website and draft proposals and recommendations released for public comment before submission for approval. An external transparency audit of compliance every three years is also contained in the Framework.

auDA's 2015–16 Strategic Plan⁷ and 2015–16 Annual Report⁸ highlight that the company is seeking to enhance stakeholder relationships and broaden the membership base (which has grown significantly between 30 June 2016 and 17 July 2017).

⁴ auDA, 2012, [Accountability and transparency framework](#).

⁵ auDA, 2017, [auDA Board Minutes 22 May 2017](#)

⁶ auDA, 2017, [Board Communique Following Special General Meeting](#)

⁷ auDA, 2015, [auDA Strategic Plan 2015-18](#).

⁸ auDA, 2016, [auDA Annual Report 2015-16](#).

Questions

Stakeholder engagement

10. Who are auDA's stakeholders?
11. How should auDA engage with its stakeholders? Are there guiding principles which should be considered?
12. Are auDA's stakeholder engagement processes effective?
13. Is a transparency and accountability framework effective?

Membership

14. Is auDA's membership structure reflective of the range of stakeholders that rely on, or interact with, the .au domain?
15. Does auDA's membership structure support it in delivering its roles and responsibilities?

Future risks to the security and stability of .au

The review will consider mitigation strategies to address future risks to the security and stability of the .au domain.

Since commercial internet services became widely available to Australians in the 1990s, the internet has quickly evolved into a utility that has driven economy-wide change. Millions of Australians are now reliant on the internet to do business, access content, engage with their community and communicate with others.

This has unlocked benefits for governments, businesses and individuals which have seen the internet become an integral part of many supply chains by providing the underlying infrastructure for communication, data exchange and other services. This has led to strong growth in Australia's digital economy, which is estimated to grow to \$139 billion annually by 2020 as more services are connected.⁹

However, as interconnection increases, the impact from malicious online activity also rises. The integrity of networks now underpins the operation of important services, from small online businesses, to connected critical infrastructure. The Australian Government's cyber security strategy highlights that cyberattacks in Australia are increasing in terms of scale and complexity.¹⁰

As the administrator of the .au ccTLD in Australia, auDA has an important role in ensuring the stability and integrity of the DNS and the top-level .au domain.

auDA has established mitigation strategies for responding to attacks against the .au domain including implementing the Domain Name System Security Extensions (DNSSEC)—which protects against attacks by digitally signing data to provide an assurance of its integrity—and introducing its Information Security Standard—to assist registrars to manage and improve the security and resiliency of their business, .au registrants and the .au DNS more broadly. auDA has also established a security and stability advisory committee.

The Government plays an important role in assessing and managing security risks associated with infrastructure that supports the national interest. For example, the Australian Signals Directorate publishes strategies that provide guidance for how organisations can mitigate cyber security risks.¹¹

⁹ Deloitte Access Economics, 2017, [Australia's Digital Pulse](#).

¹⁰ Australian Government, 2016, [Australia's cyber security strategy](#).

¹¹ Australian Government 2017, [Essential eight explained](#).

Questions

Security of the .au domain

16. What emerging risks does auDA face in relation to the security and stability of the .au domain?
17. What is best practice for DNS administration?
18. Does auDA maintain appropriate mitigation strategies? What additional mitigation strategies should be considered? How should these strategies be assessed?
19. What is the optimal mix of capabilities to expand auDA's cybersecurity preparedness?
20. How should auDA engage with the Government in its management of risks?

Consultation process

The Department is seeking submissions from stakeholders on the specific questions raised in this paper and other issues relevant to the terms of reference. Further consultation will be held as the review progresses, including with members of auDA and other entities that engage directly with the organisation.

Submissions should be received by Monday, 18 December 2017 and can be lodged in the following ways:

Website: www.communications.gov.au/have-your-say

Email: audomainreview@communications.gov.au.

Submissions must include the respondent's name, organisation (if relevant) and contact details. Submissions with no verifiable contact details will not be considered.

Respondents should be aware that submissions will generally be made publicly available through the Department's website. The Department reserves the right not to publish any submission, or part of a submission, in its absolute discretion. No correspondence will be entered into with respondents in relation to any decisions by the Department not to publish a submission in whole or in part.

All submissions will be treated as non-confidential information, and therefore able to be made publicly available by the Department, unless a respondent specifically requests its submission, or a part of its submission, is kept confidential, and acceptable reasons accompany the request. Email disclaimers will not be considered sufficient confidentiality requests. The Department is subject to the *Freedom of Information Act 1982* and submissions may be required to be disclosed by the Department in response to requests made under that Act.

The Privacy Act 1988 establishes certain principles with respect to the collection, use, and disclosure of information about individuals. Any personal information respondents provide to the Department through their submission will be used for purposes related to consideration of issues raised in this paper in accordance with the Australian Privacy Principles in the Privacy Act. If a submission, or any part, is made publicly available by the Department the name of the respondent will be included with that submission, or part. Respondents should clearly indicate in their submission if they do not wish to have their name included in any publication relating to the review that the Department may publish.

Questions about the submission process can be directed to: audomainreview@communications.gov.au.

Attachment A—Discussion questions

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