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E-Government Engagement and the Digital Divide

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Abstract: *This paper connects e-government and digital divide literature to facilitate greater understanding of online civic engagement in Australia. Strong parallels exist between the four dimensions of the digital divide - access, skills, content, and impact - and the ways e-government policy and practice shape citizen participation. Australian e-government initiatives at the federal and local level are outlined to highlight the types of citizen involvement they permit. This paper suggests that governments often equate improved information access and service delivery with online civic engagement, overlooking the importance of two-way participatory practices. If e-government is to advance to facilitate online civic engagement, greater emphasis must be placed on the capacity of citizens to contribute to, and influence, decision-making.*

Keywords: e-government, digital divide, ICTs, participation, civic engagement, policy

In recent years, the Australian Federal Government has increasingly emphasised the importance of facilitating online civic engagement. Evidence of the government's commitment appears in its e-government strategy (Department of Finance and Administration, 2006), principles for information and communication technology (ICT) enabled citizen engagement (Department of Finance and Administration, 2007), the launch of a *Government 2.0 Taskforce* in 2009 (see <http://gov2.net.au>), the *Declaration of Open Government* (Department of Finance and Deregulation, 2010), and in the *National Digital Economy Strategy* (Department of Broadband, Communications and the Digital Economy (DBCDE), 2011). The Federal Government has also set the goal of having eighty percent of Australians engage with governments online by the year 2020, recognising that this goal requires coordination between, and action by, all tiers of Australian government (DBCDE, 2011). This paper suggests that greater online engagement can be facilitated through an increased understanding of the connection between e-government and the digital divide.

Helbig, Gil-Garcia and Ferro (2009) argue that e-government and digital divide literature have been relatively disconnected but that there are important intersections between the two, which help to explain outcomes of e-government policy and practice. The various dimensions of the digital divide recognise the need to address ICT access, digital skill levels, content provision, and outcomes of ICT use (Selwyn, 2004; Servon and Pinkett, 2004). Similarly, e-government, if it is to facilitate civic engagement, requires civic ICT access and skills, with the government responsible for creating online content and spaces for participation, and drawing on civic input to guide decision-making. E-government policies and practices therefore must address each aspect of the digital divide if the intention is to facilitate increased online civic engagement.

While citizens' ICT access and skill levels are critical factors influencing e-government use, this paper focuses on the way that participatory e-government is reliant upon governments to recognise the need to facilitate the content and outcome aspects of the digital divide. It highlights how Australian e-government policies and practices at the federal and local levels often do not address the provision of spaces for civic contributions, and fail to allow civic views to impact government decision-making. At present, it appears that governments equate improved access to online information and service delivery with increased civic engagement.

1. Linking E-Government and the Digital Divide

1.1. E-Government and Civic Engagement

E-government is a term with diverse meanings, understandings, and applications, which include internal and external government communications, alterations to service delivery, broader administrative reform, and changing notions of democracy and citizenship. While early understandings of e-government often focused on the use of new technologies for one-way information dissemination and improved service delivery methods (see, for example, Silcock, 2001; Ho, 2002), more recent research places greater emphasis on the ways that e-government can be used to facilitate two-way government-citizen communication (see, for example, Norris, 2005; Homburg, 2008). Government development of advanced broadband infrastructure combined with the increased interactivity capabilities and open source nature of Web 2.0 have created growing importance on government online applications and services that facilitate democratic citizen involvement through the inclusion of, for example, user-generated content, social networking and collaboration. Such processes have broader effects on the transparency and accountability of government actions and operations (Eggers, 2005; Wong and Welch, 2004), and political or civic 'engagement' has subsequently emerged as a key research area (Reece, 2006).

In their empirical study of mediated public engagement, Couldry, Livingstone and Markham (2007) highlight that civic engagement involves citizens both paying attention to politics and being provided with opportunities to participate in public issues. Participation involves citizens being able to exert influence on decision-making processes (Norris, 2001; Burns, Heywood, Taylor, Wilde and Wilson, 2004). Couldry et al. (2007) found that the majority of citizen involvement with government occurs at the local level through, for example, attending community events and council meetings (see also Couldry and Langer, 2005). However, they note an almost complete absence of spaces for participation and engagement where civic contributions can be articulated into action, and found that citizens felt they were unable to influence local decisions. One of the proposals put forth by Couldry et al. (2007) to address this situation was the need for governments to take greater account of citizens' choices, reflexivity and understandings, as there is currently a disconnection between what governments and citizens think and do. Their study furthermore highlights the need for governments to create opportunities for dialogue with citizens (Couldry et al., 2007). Two-way e-government mechanisms offer one such opportunity.

To facilitate participatory e-government practices and online civic engagement, governments will require policies that guide the development of ICT infrastructure, enhance citizens' ICT adoption and use, support online content and spaces to which citizens can contribute, and ensure that citizen involvement influences decision-making. Cohen, van Geenhuizen and Nijkamp (2005) terms these 'direct' and 'indirect' ICT policies, with 'direct' policies explicitly concerned with ICTs (for example, access to the Internet and addressing digital skill inequalities) and 'indirect' policies

concerned with using ICTs for other goals, such as increased information dissemination, improved service delivery, or the provision of spaces for citizen discourse and deliberation. In other words, policies are used to shape ICT-related development, and ICTs can be used to assist policy processes. Online civic engagement requires both direct and indirect policies to shape e-government development to ensure equity in citizens' capacity to access and use e-government applications, to guide the provision of online content and spaces for civic discourse, and to shape the subsequent ways participation informs decision-making. In this way, e-government can enable citizens to become informed about, participate in, and influence public issues and decisions.

These broad e-government objectives are likely to require coordination through various tiers of government, for example, to combine national resources and infrastructure developments with local knowledge to ensure that implementation of e-government policies and practices is the most appropriate for citizens (see Bradford, 2008; Wilson, Cornford, Baines and Mawson, 2011).¹ Local governments occupy key positions for participatory e-government as civic involvement in politics primarily occurs through individual and community interests (Lowndes, Pratchett and Stoker, 2001). Local issue-based participation enables citizens to see the direct implication of policy deliberations for their lives (Karakaya-Polat, 2005), and is more manageable than online deliberation at state or national levels (see Jimenez, Mossberger and Wu, 2012). Such local online contexts allow for a pragmatic sense of public connection to be formed, where citizens can engage in discussions of relevance to themselves and their communities. The following section outlines the digital divide and suggests how its various dimensions relate to e-government engagement.

1.2. The Digital 'Continuum'

Socio-economic inequalities create divisions of access to, and use of, networked communication technologies, a phenomenon identified as the 'digital divide' (Castells, 2001; Norris, 2001; Loader, 1998). This divide exists at several levels. In the broadest sense, there are ICT access inequalities caused by varying levels of infrastructure and resources between different nations, particularly in relation to developed and developing economies (Cullen, 2006). But inequalities also exist within nations, where different populations in a country are disadvantaged along, for example, geographical, gender and racial lines. Similarly, these types of divisions exist within populations and areas covered by cities and towns (Baker and Coleman, 2004; Holloway, 2005).

While access to sufficient ICT infrastructure had been the primary focus of digital divide debate, recent research stresses individual capabilities and skills as key factors affecting Internet adoption by disadvantaged groups (see, for example, Loader and Keeble, 2004; Baker and Coleman, 2004; Hargittai and Shafer, 2006). The digital divide is now considered as "a more complex continuum of use, and the need for skills as well as access" (Mossberger, Tolbert and McNeal, 2008, p. 9). Access to computers in homes or in public remains important, but access alone means little without the necessary skills to use the technology.² Skill divisions are based around socio-economic standings associated with, for example, income, age and education (Mossberger et al., 2008).

¹ At present, there is no requirement for the three tiers of Australian government (federal, state and local) to coordinate e-government policy or practice, meaning e-government initiatives are often autonomously developed and implemented by individual agencies and authorities.

² Nevertheless, access to improved technology, such as broadband, facilitates more advanced citizenship practices and contributes to increased skill development (Mossberger et al., 2008).

Warschauer (2003) highlights the importance of addressing both access and skills in policies to promote ICT use for social inclusion.³ Inequalities vary depending on specific circumstances and often require multiple strategies to address them. Some populations may demand more advanced stages of infrastructure (for example, the need for broadband), while other disadvantaged groups may benefit from targeted approaches, such as free public access terminals or training programs (see Warschauer, 2003). Local governments are ideally positioned to recognise and address community-based issues that limit ICT use for social inclusion. Moreover, taking a local government approach to the digital continuum enables greater knowledge and understanding when it comes to implementing effective e-government practices. For example, local governments can specifically develop websites to suit community needs in terms of the content provided, the languages in which the content is offered, the type of support needed, and how inclusion can produce meaningful outcomes for citizens (Warschauer, 2003; Selwyn, 2004).

In order to effectively assess the impact of socio-economic divisions on online civic participation with government, it is necessary to distinguish between different areas of the digital divide (or continuum). Servon and Pinkett (2004) suggest three dimensions:

1. Access to infrastructure – computers and the Internet;
2. Computer literacy – the knowledge and ability to use ICTs; and
3. Content – being able to find and contribute to information relating to users’ lives, communities and cultures.

(Servon and Pinkett, 2004, p. 323)

In the Australian context, limitations to access occur through the rural–urban divide; in remote areas with low population levels, adequate infrastructure is lacking compared with economically affluent, urban regions, where technological infrastructure (that enables reliable and quality access) has often been prioritised (see Graham, 2004). However, the Federal Government’s *National Broadband Network (NBN)* aims to provide ubiquitous, high-speed broadband of at least 12 megabits per second to all Australian premises. Fibre optic connections will be available to 93 percent of households, with the remaining areas covered by fixed wireless and satellite technologies (see DBCDE, 2011). Currently, a lack of service providers in remote regions inhibits competitive pricing, resulting in an increased cost to access inferior infrastructure (Eardley, Bruce and Goggin, 2009). While the *NBN* has a national uniform wholesale price, retail costs will be determined by the service providers that use the network (DBCDE, 2011). The cost of accessing ICTs prevents those with limited financial resources (both rural and urban) from taking advantage of these new technologies. However, Servon and Pinkett (2004) note that the gap between those who can and cannot access ICTs is rapidly closing. In terms of computer literacy and the capacity to use the Internet, inhibiting factors include age, education levels, and the appropriate training or technical knowledge and skills. Such knowledge and skills also need to be updated to suit changes in the ICT environment, which requires access to newer technologies and content (Warschauer, 2003).

³ More broadly, government ICT use must coexist with traditional methods for civic involvement to ensure social inclusion (Cullen, 2006).

Even if citizens have access to ICTs and sufficient ability to use new technologies, they are not necessarily provided with information relevant to their lives, community or culture, or given the capacity to contribute to this content. Without such meaningful content, individuals may be unable to perceive benefits of ICT access and use (whether they be social, cultural, psychological, economic or political reasons), which influences individuals' acceptance of, and motivation to use, new technologies (Selwyn, 2004). In other words, citizens' needs and interests must be reflected in online content and applications to encourage use. Further content and contribution barriers also occur as the result of other factors, such as linguistic backgrounds and literacy levels (Servon and Pinkett, 2004; Cullen, 2006). These divisions impact on individuals' capacity and desire to access and use e-government mechanisms.

Selwyn (2004) suggests similar dimensions of the digital divide as Servon and Pinkett (2004), but adds a fourth factor relating to the actual and perceived outcomes and consequences of ICT use.⁴ This dimension is concerned with the way ICT use relates to broader participation in society. In terms of e-government, such outcomes and consequences include increased political activity and its impact on policy, and the effects that manifest from this type of participation. Importantly for e-government, this fourth aspect of the digital divide advances from the provision of ICT access, skill development for effective use, and sufficient content, to the need for online citizen participation to have an *impact*. Citizens are unlikely to utilise participatory e-government mechanisms if they do not perceive that their participation will have tangible results (see Margolis and Moreno-Riaño, 2009). These digital divide dimensions therefore influence both "the accessibility and uptake of e-government in all communities" (Cullen, 2006, p. 289). As such, the development of e-government policies and practices needs to take these factors into consideration.

There are strong parallels between the digital divide and e-government. Figure 1 has been developed to illustrate the relationship between e-government, ICT policy areas, and the four dimensions of the digital divide (access, skills, content, and impact).

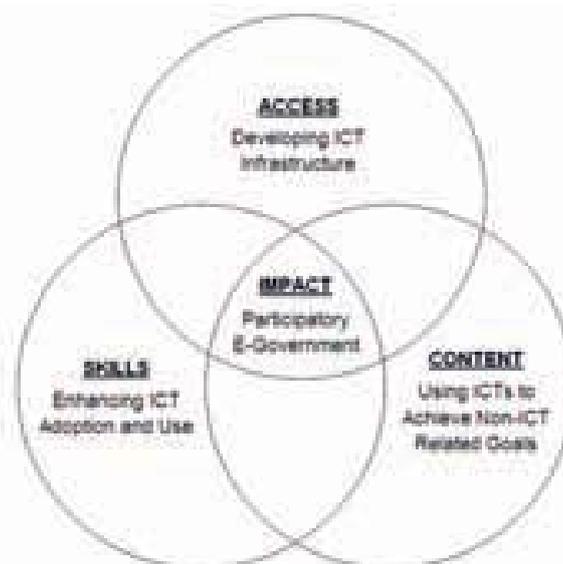


Figure 1: Linking E-Government, ICT Policy, and the Digital Divide

⁴ Whilst differently labelled, Selwyn's (2004) first three digital divide dimensions – formal/theoretical access to ICTs and content, effective access to and use of ICTs and content, and engagement with ICTs and content – align closely with Servon and Pinkett's (2004) three dimensions.

This figure highlights how a cohesive approach that involves both direct and indirect ICT policies to address each of the four dimensions is necessary to facilitate civic participation through e-government. Such a framework provides participatory spaces, enables citizens to access and contribute to these spaces, and ensures that online civic discourse is considered in decision-making. The following section outlines key e-government developments at the federal level in Australia, and how these address the various aspects of the digital divide and facilitate citizen involvement.

2. E-Government Engagement in the Australian Context

2.1. Australian Federal E-Government: Service Delivery vs Civic Engagement

There is an array of Australian federal documents and initiatives surrounding e-government that address direct and indirect ICT developments and the various aspects of the digital divide. For example, as previously outlined, the *NBN* is expected to enable greater access to ICT infrastructure throughout Australia. The government has also endeavoured to address ICT skill inequalities through programs such as 'Digital Communities'. In this program, the government will invest AU\$23.8 million over three years to establish digital hubs in forty communities from the *NBN* initial rollout stage, where citizens can receive training to develop digital literacy skills (DBCDE, 2011). In terms of indirect ICT applications, the government's *Declaration of Open Government* indicates the desire to create a culture of engagement that promotes participation in Australia's democratic processes, with government-citizen collaboration to be both enabled and encouraged to improve policy outcomes (Department of Finance and Deregulation, 2010). This is a promising objective in terms of the provision of online content and spaces for participation, as well as the use of civic involvement in government processes.

However, current federal e-government initiatives are predominantly focused on ICT use for one-way information provision and enhanced service delivery methods. For example, the 'improved online service delivery and engagement goal' of the Federal Government's *National Digital Economy Strategy* (DBCDE, 2011) aims to develop three initiatives. The 'tell us once' initiative is currently investigating ways to provide more customer-centric and efficient online services, such as enabling pre-filled forms for individuals who have previously completed a transaction with a government agency. The 'service delivery reform' initiative intends to transform the way people contact Human Services, with the aim of providing online transactions such as forms, letters, and benefit claims. The 'data.gov.au' initiative seeks to provide an online catalogue of government information, including downloadable datasets. While each of these are important aspects of e-government that will help to enhance information dissemination and service delivery and improve e-government for civic use, they do not address the 'engagement' aspect of the government's goal. That is, these initiatives are not intended to provide two-way spaces for civic dialogue, where contributions inform decision-making.

Instead, these initiatives follow previous schemes that stressed 'engagement' but in practice followed a service delivery trajectory. For example, a streamlined website (Australia.gov.au) was created under the Federal Government's e-government strategy, and was meant to provide the framework for online civic consultation and engagement (Department of Finance and Administration, 2006). However, opportunities for two-way interaction on the site are largely limited to links to public consultations that request formal submissions be posted or e-mailed to the government department. Even the official title of the e-government strategy – *Responsive*

Government: A New Service Agenda – appears to assume that government responsiveness is related to service provision. The implicit assumption, although flawed, is that the concepts of service delivery and civic engagement are synonymous. Greater understanding of the differences between improved services and online engagement is required if the government is to address all four aspects of the digital divide in its ICT use. Engagement, as detailed in the federal documentation, requires the actual implementation of online contexts for two-way participation, where civic contributions influence policy outcomes.

As previously suggested, the scale of federal e-government presents challenges to facilitating participatory online spaces and allowing civic discourse to influence public policy (see Jimenez et al., 2012). Localism has subsequently emerged as a key theme in e-government research, particularly as citizen involvement in politics is understood by citizens as primarily taking place at the local level (Couldry and Langer, 2005). Local e-government mechanisms that enable two-way citizen involvement therefore offer key spaces for the enactment of political action. For this reason, it is useful to explore e-government practices at the local level, and how civic input has been enabled and received at this level of government decision-making.

2.2. Local E-Government Engagement: The City of Casey

Local governments provide a useful setting for participatory e-government, particularly for reasons of scale and increased citizen interest in local issues (Lowndes et al., 2001; Karakaya-Polat, 2005; Jimenez et al., 2012). This section briefly outlines one local government's attempt to facilitate an online context for civic consultation.⁵ While it is recognised that a single case study does not provide sufficient reflection of all Australian local governments, these local experiences offer insight into areas and issues for future development.

The City of Casey (Casey) was selected for examination for several reasons. Casey is Australia's seventh largest local government in terms of population (over 256,000 residents), with 89 percent of the municipality's residents under the age of 60 and 29 percent under 18 years of age. In comparison, throughout Australia, 81 percent of residents are under the age of 60 and 23 percent are under 18 years (Australian Bureau of Statistics, 2010a, 2010b). This observation suggests Casey's young population may have an increased likelihood of familiarity with, and capacity to use, new media technologies than other local government areas (see Montgomery and Gottlieb-Robles, 2006). The council is also well positioned in terms of infrastructure and resources (both financial and personnel) to utilise e-government mechanisms, and has autonomously developed an extensive online presence without the aid of an e-government or Internet related policy guiding its indirect ICT use.

The local government's main website (www.casey.vic.gov.au) offers an abundance of information about the local area, upcoming events, and council activities, and all publicly available official documentation (such as policies and budgets) is available to download.⁶ The website receives substantial usage, with over 736,000 visitors viewing more than 2.8 million pages in the 2008-2009 financial year. The council uses social media including Facebook, Twitter and YouTube

⁵ In order to accommodate the length of a conference paper, only one local government example will be explored.

⁶ Key information on the council's website, including local services, laws, construction requirements and community centre details, is also offered in five languages to cater for the multicultural community.

(albeit restrictedly) to further information dissemination to the public. Innovatively, Casey established a civic networking website (www.caseyconnect.net.au) for local groups and associations to create free webpages to recruit new members. In November 2010, Casey launched a community consultation website (caseyconversations.com.au) in order to understand the needs and preferences of local citizens and to enable civic involvement to shape decision-making. Furthermore, the local government employs measures to address ICT access and skill inequalities, including the provision of free public access terminals and offering Internet education programs in local libraries.⁷ These initiatives and measures are quite advanced for an Australian local government. In contrast, most Australian local e-government initiatives tend to focus on one-way information dissemination and simple service delivery practices through websites (O'Toole, 2009).

Overall, in relation to e-government engagement, Casey's citizens are able to become informed about and participate in public issues online. In terms of how the council addresses the digital divide, Casey's current practices facilitate access to technologies, help ICT skill development, provide extensive content relevant to the community, and intend on allowing the outcomes of civic contributions to impact local decision-making. As the need to consider the fourth digital divide dimension to enable e-government engagement is a key concern of this paper, the online civic consultation facilitated by Casey warranted further analysis to determine if and how outcomes of deliberations impact decision-making.

While the development of the consultation website highlights that Casey Council has recognised the need to incorporate participatory practices into its Internet use, civic contributions to this site do not yet appear to influence Casey's decision-making processes. In part, this is due to the fact that the discussion forums offered on the site are predominantly for advocacy campaigns, in which case the responsibility for final decisions rests with state and federal authorities rather than with the local government itself. The council has also outsourced the development, maintenance and moderation of the site, and it does not use a government Internet domain. This indicates a reluctance to incorporate *Casey Conversations* into the local government's everyday practices and potentially mitigates any likely impact of discussions on decision-making. Additionally, there is no indication that local government representatives engage with the website or read citizens' posts.

Citizens' comments on *Casey Conversations* have begun to recognise a lack of responsiveness by the local government. An example of this appears in a discussion forum that was launched following flooding throughout the municipality in February 2011, when the drainage systems jointly managed by the local government and water authority were unable to cope with heavy rainfall and rapid flood waters. The government-initiated forum requested citizens' experiences of the floods, stating that improving drainage systems was a key priority for the council. The forum has been viewed over 1,200 times and currently contains 29 threads. Citizens posted comments about how they were affected by the floods, and offered information on community-run support groups that were set up for the emergency. They also suggested potential action that could be taken by the council to prevent the severity of future flooding, such as building additional footbridges over drainage areas, sealing dirt roads, keeping drains along roadways clear of rubbish, and employing mobile-based emergency notification systems. Four official responses

⁷ The broadband infrastructure intended to be installed under the Federal Government's *NBN* will facilitate improved civic access to ICTs within the municipality. Telecommunications infrastructure developments in Australia lie outside the control of local governments.

were posted over a twelve month period by an administrator. Each was a generic 'thank you for your feedback' reply; often weeks after citizens' comments had been made. Use of the website does not appear to result in effective communication with the local government. As one citizen's post on 19 July 2011 suggests, "I believe this site is more of a front to stop us calling and bothering the Casey, Seriously will we get any feed back from this?" (Peterk, errors in original). A generic thank you response was again given by the administrator. The council did not undertake any of the suggestions provided by citizens and, in June 2012, the municipality again flooded resulting in widespread emergency evacuations and substantial further damage to homes and businesses.

The launch of the consultation website was a promising local e-government development that aimed to provide spaces for involvement in issues of direct relevance to citizens. However, this example indicates that the government's acknowledgement of the need to provide relevant content and contexts for online citizen involvement must be coupled with genuine willingness to incorporate civic views into decision-making. While Casey's online consultation site is an advanced local e-government initiative that moves beyond early understandings of e-government and its service delivery focus, a major divide still exists within the local government's online practices in terms of engagement. The council has addressed the access, skills and content dimensions of the digital divide, but the capacity for citizens to exert influence on local decisions through online participation remains limited. It is likely that, in part, this has resulted from insufficient policy guidance of Casey's e-government applications and how online civic involvement can be incorporated into decision-making processes.

3. Conclusion: The Role of Government Willingness

In Australian e-government, one-way information dissemination and improved service delivery practices are often prioritised over contexts for citizen participation. The intersection between e-government and digital divide literature provides a useful framework for understanding government ICT use and how it impacts on civic engagement. If governments intend to enable online engagement, a cohesive approach to e-government policy and practice is required. This approach would address access and skill inequalities, offer content and spaces for civic discourse, and enable that discourse to inform decision-making. Opportunities for online engagement rely as greatly on governments addressing the content and impact aspects of the digital divide as ICT access and skills.

Interestingly, while the Australian Federal Government is addressing access and skill inequalities and has extensive policies stressing the value of online civic engagement, the online content and practices implemented are primarily service delivery focused. In contrast, the City of Casey example highlights the development and use of participatory practices at the local level. However, like many Australian local governments, Casey is developing its e-government without policy documentation to guide and enhance civic engagement, and there is little evidence to suggest that community consultation is informing decision-making. These observations highlight the value of greater coordination between national and local governments to advance online civic engagement mechanisms. For example, national infrastructure developments and training programs can draw from local knowledge to ensure that implementation is the most appropriate for locales and citizens' needs. Conversely, local governments can utilise national resources and policy guidance to enhance the participatory practices provided to citizens and to shape the way civic involvement informs decision-making.

Previous research on e-government and the digital divide has highlighted that government willingness to use ICTs to communicate with citizens is crucial for the online participation opportunities provided to, or withheld from, citizens (see, for example, Cullen, 2006). This paper extends this argument and demonstrates that government willingness also determines whether civic participation is considered in decision-making. Without recognising that citizen involvement needs to have a tangible impact, participatory e-government practices are unlikely to effectively encourage civic use, let alone facilitate citizen engagement with government.

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