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Key government agency perspectives on location based services regulation

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ABSTRACT

Keywords:

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LBS

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The increased prevalence of location based services has raised a number of socio-technical issues, especially in respect of the privacy expectations of individuals. Although there have been assessments of the regulatory environment regarding location based services, the research presented in this article engaged key government agency stakeholders, rather than end-users. In doing so, it provides a contribution that complements the work with end users provided by others. The article also considers the policy context for location based services regulation. It does this by describing the policy-making processes in Australia in order to provide a context for the views of government agency stakeholders. The article analyses official statements received from privacy-related and emergency-related government agencies in Australia in order to assess stakeholder views.

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1. Introduction

1.1. Positioning

Location Based Services (LBS) are services which use information about the location of one or more service elements in their operation. LBS are becoming ubiquitous. Some of these services are apparent as they are associated with the provision in an active device of location enabling technology. These enabling technologies include global positioning system satellite receivers as well as the use of known WiFi services to provide geolocation information. Passive devices can also form part of a location based service. For example, a credit card does not have location enabling technology. However, when a credit card is used for a transaction, the location of the credit card user is often known from the location of a store, the global positioning system from a card reader or a location associated with an Internet Protocol address for electronic commerce transactions. It is in the context of this ubiquity that this article looks

at the regulation of Location Based Services from the point of view of government agencies.

The perspectives of government agencies are critical to decisions that create any regulatory environment. In the case of location based services, there are multiple stakeholders in the sector that is broadly described as “government”. This article focuses on privacy-related and emergency-related government agencies at a Federal and State level in Australia.

1.2. Approaches to LBS

LBS are commonly termed location services, location-aware services and/or location-related services due to their development and use in a variety of industries and by diverse communities, and are also classed context-aware applications (Küpper, 2005; Zhu et al., 2010). As Bauer et al. (2005) state, noteworthy features of LBS include “mobility, ubiquity and personalization.” Various definitions of LBS are available, given the multiple means associated with classifying LBS, and the myriad of application areas serving specific types of customers/user groups.

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Valuable definitions are provided in the associated literature (Astroth, 2003; Giaglis et al., 2003; Jacobsen, 2004; Küpper and Treu, 2010; Lopez, 2004; Shiode et al., 2004; Spiekermann, 2004).

The study of LBS regulation requires technical, social and environmental considerations. The technical considerations include the technologies upon which LBS are built. However, technical considerations are not technologically determinative especially if LBS is regarded as “disruptive” (Danneels, 2004). Rather, they depend on the stakeholders involved in the development and delivery of LBS applications. In turn, the stakeholder positions will also be influenced by the current and projected state of the industry. As an example, the value chain in LBS is described as having many operational actors (Küpper, 2005). The use of LBS has the potential to raise ethical issues. That is, there are ethical issues associated with the use of knowledge about the location of individuals and particularly individuals who are ‘at risk’. The literature refers to these as the socio-ethical dilemmas, associated with LBS. Several authors review these socio-ethical challenges (Elliot and Phillips, 2004; Michael and Masters, 2006; Michael et al., 2006; Perusco, 2006; Perusco and Michael, 2007). Environmental, including regulatory, considerations relevant to LBS are influenced and uniquely shaped by factors such as cultural, political and economic conditions and the outcome in a specific regulatory environment such as that in Australia (Abbas et al., 2013). This leads to a contested literature (Barreras and Mathur, 2007; Cho, 2005; Clarke and Wigan, 2011). This article does not address the issues from the perspective of users of location based services (Constantiou et al., 2014; Zhou, 2011). Instead, this article adds to those contributions by providing the views of government stakeholders.

As the survey of theories and methods of previous work set out above demonstrates, there is an opportunity to provide insights by considering the distinct and individual perspective of government stakeholders. The motivation behind the work is to help build a holistic view of the LBS sector. In the context of the technical, social and environmental considerations pertaining to LBS, the government stakeholder influence on regulatory discussions and debates is crucial. Government stakeholders are likely to be drivers of the policy context of LBS socio-technical systems embedded within a wider social context.

1.3. This article

The article begins by looking at approaches to location based services. The next section provides the policy-making context that is faced by government agencies in their dual role of both contributing to regulatory settings and working within those settings. This article provides a qualitative analysis of the official statements received from privacy-related and emergency-related government agencies. It also examines the privacy-related and emergency-related themes and sub-themes identified by government agencies. It ends by drawing some conclusions.

2. Context – the policy cycle

2.1. General

A useful model of policy formation and implementation is that Australian public policy is derived from “structured

interaction” (Maddison and Denniss, 2009). This is an emerging approach, which diverges from the traditional government-dominated view, to incorporate multiple stakeholder perspectives and competing interests in making policy decisions. These decisions can include both action and deliberate inaction and depending on the desired outcome, a particular route is taken (Fenna, 1998). To aid in formulating policy, Bridgman and Davis (2004) suggest that policies be regarded as “theories about the world”, the success of which is reliant on careful design. This is a perspective shared by Fenna (1998) who asserts that theory is central to public policy examination. In effect, this structured interaction is another lens on the more general approach of evidence-based policy (Head, 2008; Michael and Michael, 2008), set out in more detail in Section 2.3 below. There are practical constraints to this approach to policy. One is consistency in policy formulation determined by a “whole of government” or “joined up analysis” approach referred to by Marsden (2001) in the context of technology regulation.

Policy-development can be accomplished through the use of differing processes depending on the nature of the issue at hand (Fenna, 1998) and in a flexible and responsive manner (Bridgman and Davis, 2004). However, “there are constants in good policy making – an intellectual rigour about issues, a commitment to procedural integrity and a willingness to experiment and learn through implementation and adaptation” (Bridgman and Davis, 2004). A theoretical model, relevant to this research, is the Australian Policy Cycle, established by Bridgman and Davis (2004) and displayed in Fig. 1. Collectively the stages within the cycle, explained in Table 1 are intended to encourage articulation of the given problem, collection of evidence and perspectives, selection of a particular decision, implementation of an action plan, and appraisal of the aforementioned stages resulting in recommencement of the cycle and further iterations (Bridgman and Davis, 2004).

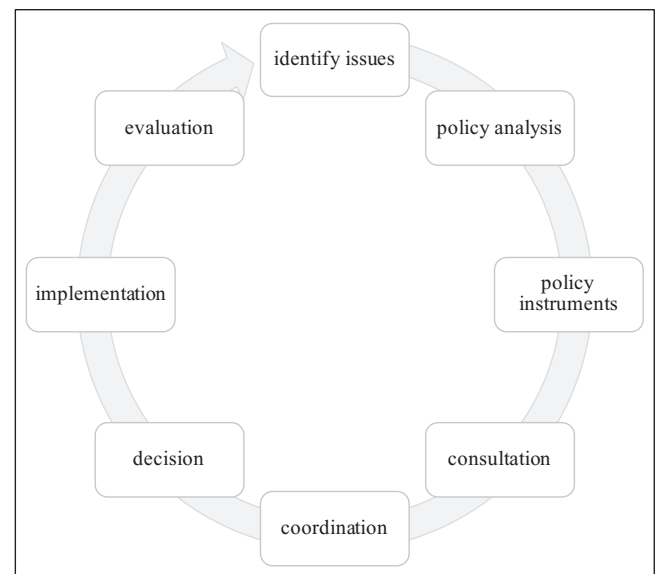


Fig. 1 – Australian Policy Cycle adopted from Bridgman and Davis (2004, p. 26).

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