The Usability factors of lost Digital Legacy
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The Usability factors of lost Digital Legacy data from regulatory misconduct : older values and the issue of ownership

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Abstract—The increased acquisition of digital objects over time has grown in the 21st century to represent objects of value as digital assets. Many people who plan their lives are unaware of the transfer and ownership challenges associated with digital legacy. This paper discusses the burden of digital legacy management and the need for regulatory reform in the transition of digital objects to digital assets. A study of thirty two (n=32) Australians over the age of 65 identified critical issues in the transfer, ownership, management and mobility of digital objects under legacy conditions.

Keywords—Digital Asset, Legacy contact, Data Longevity, Digital Legacy, Inheritance, Digital Estate, Data Heir, Beneficiary, Digital Afterlife

INTRODUCTION

People have many digital assets and use them on a daily basis. In many cases they do not make any plans about their digital assets in the event of their death. Ninety percent of Australians have a social media account yet eighty-three percent of them have not spoken with family members about what they want to happen when they pass away [1]. Of the Australians who have made a will, only three percent of them stipulated the inclusion of digital assets relating to their social media accounts [1]. This research concluded that more than eighty percent (81.65 %) of Australian citizens own digital assets. The most commonly owned digital assets included social media, e-mails, and web-based banking records [1]. More than seventy percent (71.25%) of these Australians who owned digital assets were ignorant about what would happen to these digital assets after their death. Research suggests that Australian legislation pertaining to digital assets is inadequate [1].

BACKGROUND TO THE STUDY

A significant percentage of the population comprises of older people. Within Australia 82% of all deaths are from a cohort of people aged 65 or over [2]. In a study on estate planning and digital assets [1], it was demonstrated that more than 70% of Australians who had some form of legal Will had no clear understanding about what would occur to their digital assets after their passing. The challenge to understand the growth in digital assets is best described against a background of time. The majority of digital assets did not exist by any significant number before the 21st century [3]. In contrast traditional inheritance and physical asset planning have been commonplace for centuries, and the emergence of digital assets in the last two decades has underlined the need to recognise the evolving usage and increased value of digital assets and the role of data heirs. In some cases that value is seen in terms of the financial value, whilst in other instances the value is a measure of their sentimental, historical, or legal worth.

DIGITAL LEGACY MANAGEMENT

We define digital legacies as assemblies of digital objects that endure over time in order to be available for future generations [4]. Digital legacies are relatively new in this sense, since they have been popularised by social media and digital platforms such as Facebook [5], [6], [7]. Digital objects are critical objects because they provide the opportunity for a digital form of identity preservation that was (in the 20th century) largely unattainable [3].

Given the global growth of ageing populations and the proliferation of technology acceptance of digital technology engagement, it is important to note the transformation towards the conversion of physical assets into digital objects that are retained as digital assets [8], [9]. This transformation brings with it significant challenges that relate to accessibility and which bring into line inheritance issues of object mobility, transferability, and ownership [9].

Other digital transformational concerns relate to the lack of understanding about the rules that apply to the management and access of digital content. These concerns impact upon parallel apprehensions with health care in the form of dementia and memory loss and early onset cognitive impairment. Older people experience cognitive impairments as well as visual or physical disabilities that will impede their use of digital technologies [10], [11]. These transformations are associated with inflexibility in adjusting to different technologies among the older Australians [12].

Digital content in the form of photographs, videos, tweets, posts, blogs, electronic books, and social media accounts are now used as commonplace objects in people’s lives [13] (and they underpin their histories [5], [14]. The literature indicates insufficient understanding and a disregard for the needs of ordinary content users who seek to comprehend the management of digital objects regarding both the ownership and the control of their digital content when viewed as legacy content [8], [15], [16]. This has resulted in lost and unrecoverable data from online platforms and services that prohibitive and obscure in terms of individual data heirs and their expectation for inheritance that includes high quality data preservation and data mobility [17], [18], [19].

Digital objects, digital systems, and digital assets overlay a substantial part of people’s day to day routines [20]. Therefore, it is important to comprehend the overall process and the steps involved in maintaining one’s own digital legacy. Digital legacies are important for older people who expect to leave behind digital objects that require management
in terms of legacy inheritance, ownership and access [2], [15], [21]. This impacts on how heirs and beneficiaries will exploit and value an inherited digital legacy. Digital Legacies increasingly make up a larger proportion of all components of a deceased person’s estate [2].

DIGITAL LEGACY MANAGEMENT CHALLENGES

There are four challenges for digital assets as legacies after a person passes away. The first is the ability for another person to transfer these digital assets [4-5], [22-28]. The second challenge lies in the ability to gain access to these digital assets [1], [26], [27]. Many authorised people (spouse, partner, executor, and beneficiary) may not have the appropriate access because of encryption, authentication, email access, or password credentials [5-6], [26-27], [29-37]. The third issue is about the longevity of digital assets and refers to how long a stored digital asset is available for after the death of a user [35]. The fourth challenge concerns the level of understanding, definitions, and terminology relating to digital objects, systems, assets and legacies [3], [38].

These challenges highlight the lack of regulatory policy in digital legacies. Many firms impose their own restrictive internal rules. Processes for the conclusion of a deceased online bank account require a significant burden in the form of documentation and verification [1], [4], [23], [26-27].

Third party access to the digital assets of a deceased person is both complex and inconsistent across platforms [5]. Different digital systems and platforms operate under different rules and policies. In the examples such as Yahoo and LinkedIn, accounts are terminated upon receipt of a Death Certificate [1], [34]. In contrast digital assets held in an iTunes account remain static, and the files are non-transferable [1], [39].

Facebook has a different approach to digital legacies. A Facebook user can appoint a “legacy contact” to take care of a Facebook account upon their demise [1], [6], [34], [40]. The legacy contact can opt to memorialise the account, or they can choose to delete the account [41-42]. These variations result in disputes and disagreements from family members. Data recovery can be prohibitive where companies operate under foreign control [21]. In the case of Facebook and Google, complaints must be lodged to the Federal District Court of Northern California, whilst for any issues relating to Microsoft, they are referred to the Federal District Court in Washington State [1].

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The legacy management of email and social media accounts is also inconsistent between different firms. In the case of Microsoft, the legacy policy allows the “next of kin” to receive access to certain data. Google has a “Digital Heir” policy that allows for data deletion after up to 12 months of inactivity, whilst Twitter deletes all data after 30 days. It is difficult to synchronise the management of digital legacy data across differing accounts. The rules of different firms do not align to a single consistent regulation, law or government policy. Facebook and Apple have systems that grant access rather than ownership to data [43-46]. The literature demonstrates variations and inconsistencies that represent barriers to an organised approach to digital legacy management.

HYPOTHESIS

To verify the impact of the management challenges that were revealed through a review of the literature, a hypothesis was framed in order to examine the impact of digital legacy management through an interview process with older Australians regarding their digital assets. The following hypothesis is representative of the problem.

H1. Systems that protect digital objects that become Legacy Data are at risk of data loss through rules and regulations that are governed by private and financially dependent control.

METHOD

Older Australians formed a sample population for this research. The participants were aged 65 and above and were drawn from the Perth Metropolitan area of Western Australia. The study engaged 32 participants. The sample size (n = 32) was decided based on the rationale to provide a largely qualitative approach that allowed for close attention to individual details from each participant [47], [48]. Respondents were invited to participate in a series of cyber-safety forums that were advertised by email and social media promotion to known aged community organisations throughout the metropolitan area, from which the sample group of applicants was drawn. Participants were required to consent to participate before being interviewed.

The research used semi-structured interviews to collect the perceived understandings of older Australians towards Digital Legacies. These interviews considered the usability of digital objects, digital services, digital devices and digital platforms. The interviews tested participants for known terminology and comprehension about digital objects, services and platforms. All identifying data relating to the respondents was anonymised to protect identity. Responses were de-identified for this study.

ANALYSIS AND DISCUSSION OF RESULTS

Regulatory incongruence versus normative usability.

The research data pointed to three main areas of inconsistent management practices in relation to digital legacies. These were categorised under the terms Transferability, Accessibility, and Longevity. The results indicate that normative expectations from the study participants were significantly different to the specified rules, practices and policies of the various service platforms and the product useability (Table I).

<table>
<thead>
<tr>
<th>Inconsistency in Digital Legacy Management</th>
<th>Factors of Incongruence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transferability</td>
<td>Storage of Digital Assets</td>
</tr>
<tr>
<td>Accessibility</td>
<td>Expected retained access</td>
</tr>
<tr>
<td>Longevity</td>
<td>Decay</td>
</tr>
</tbody>
</table>

TABLE I. FACTORS OF DIGITAL LEGACY INCONGRUENCE
TRANSFERABILITY:

Lack of Understanding about the storage of digital assets

Responses showed that older people do not understand storage and management systems for digital objects, in particular those systems that relate to Cloud storage. Older people making decisions about the value of digital objects do so on the basis of an assumed ability to access those objects. Responses showed that older people in many instances do not grasp the concept of digital photographs, digital music, and -books being stored in a cloud environment, but instead believe that the items remain stored on their device.

Responses show that older people assume their device (e.g. phone or tablet) holds all of their data, rather than that their device provides a means of accessing it. Some older people believe that by passing their smart phone to someone else after their death, that the other person will automatically have the same access and right of access as the deceased. In many cases a digital heir can find themselves excluded from digital assets that hold value and benefit.

Lack of Understanding about the access of digital assets from devices and platforms

A similar misunderstanding occurs for digital platforms rather than devices. Responses showed that older people do not understand that Facebook is a platform that gives access to photographs. This research determined that many older people mistakenly believe that they could successfully bequeath their digital photographs to a nominated other by letting them gain access to the deceased person’s Facebook account. The rules of Facebook clearly state that a Facebook account cannot be transferred to another person.

The findings from this research indicated that there were three distinct sets of expectations. On one hand, some participants held a firm view that they either did not expect their digital objects to survive or that they were not concerned. In some instances they cited an expectation that a family member might be capable of finding and using digital objects, whilst other responses held no specific expectation that their digital objects would be used after their passing. On the other hand, many older people held the view that their personal photographs would be easily transferable (and therefore likely to survive into perpetuity). A third expectation was held by some research participants who felt that digital objects would automatically be passed to a living person upon their death. Of this group, none were able to give specific descriptions about how such a transfer could take place, yet as a group they held the conviction that any transfer and survival of digital objects and assets would be automatic.

The findings of this section show the significant differences between those older participants who were interviewed for this research and the large-scale platforms who house and store certain digital objects in such a way as to provide access. In contrast to the expectations of the participants who were interviewed for this research, major companies such as Facebook publicly state their intention to retain access to digital objects (in the form of digital photos and images) even though the originators of those images may hold no expectation about their ongoing storage and accessibility.

Expectations about transfer and ownership within a digital estate

“No, I don’t know. I probably expect my children to take much into consideration because any transfer or re-organising of digital objects would take place without them doing anything themselves. These respondents saw their digital objects and digital asset management as an automatic exercise, and one that did not require them to take any action.

“Well what I thought was, when I die, my Executor will have access to my computer, my iPad and my iPhone and anything else which is digital.” (Respondent 28)

This research further showed that because older people assumed that digital objects held the same ownership, access and transfer rights, that there was no need to differentiate between digital and non-digital assets. This research demonstrates that people make choices about their legacy items based on the expectation of unfettered transfer, ownership and beneficiary access, irrespective of whether an object is physical, printed, intangible, or digital.

“No, I don’t know. I probably expect my children to take responsibility for that. I haven’t put that in my Will.” (Respondent 29)

The Burden of Access

The results showed that the respondents of this study confused technical access (in terms of the technological capability to understand a system) with regulatory access. In the case of regulatory access, there are many examples of where a digital heir does not have access to another person’s digital objects because they are stored as part of a platform or device that assumes access is only granted to the original
consumer, and that access rights cannot be conferred to another.

I am still trying to clear up with my mother’s photos and she is gone into a nursing home and trying to get rid of the trap that people don’t want you to know”. (Respondent 4)

In many cases older people had no current understanding that their existing access to music (and photos in the case of Facebook) was under licence rather than as pure data storage. In most instances older people assigned an expectation of access and ownership that was aligned to the transfer and ownership of physical objects such as the family photo album, musical records, and other physical and tangible data.

LONGEVITY

Some participants indicated an assumption that their social media accounts would be easy to take care of, or would take care of themselves over time. Several respondents suggested that their accounts would “fade” over time. Other responses suggested that it would be a simple matter for someone (e.g. a daughter) to simply shut down a social media account.

“It doesn’t bother me, it will fade away with me I suppose.” (Respondent 16)

“I am not concerned about it, I think it will just die away.” (Respondent 23)

In the case of Facebook, the rules governing digital legacy management relate to a specific method for transferring access to digital objects such as photographs. In addition, the company (Facebook) has rules regarding options to memorialise the digital memory of a person after their death. These rules are further compounded because there are circumstances where the memorialisation of an account can be driven by an authorised person acting on behalf of a deceased estate, yet can also be driven by the actions of a close friend (without the authorisation of an official from a deceased estate). This finding runs parallel to the work of Genders and Steen [8] who describe financial planning as a clash between companies and the rights of digitally defenceless people: “There is a collision between the rights and needs of vulnerable people in modern society, and the increasingly global electronic register of our critical information and assets” [8].

In the case of other digital platforms such as Apple and iCloud, the rules governing the digital legacy management are different to those of Facebook. For example, the rules relating to any access of photos or other objects are expressly forbidden under their End User License Agreement. Facebook openly promotes a Digital Contact system for the ability to express their right of access to objects such as photographs. Apple and iCloud expressly forbid the access to photographs.

The findings show that unlike the rules pertaining to the physical assets of an estate, digital objects are restricted and controlled by a range of individual company rules that are vastly different from each other, and make no provision for the wishes of the deceased, irrespective of their written Will or last testament.

Some older people acknowledged the challenge with iTunes and the issues relating to digital content access. Older people have an awareness regarding the way iTunes restrict and control the management of digital objects in the form of digital music. Older people using iTunes cards are unaware that the cards provide access to listen to music but not own or transfer ownership to that digital content. It is a finding of this research that older Australians will benefit from increased awareness through public programs that explain the limited ownership, restricted accessibility and diminished rights of people making purchases of digital content.

CONCLUSION

This research concludes that Older Australians are significantly challenged in terms of managing their digital legacies. These challenges are underpinned by a lack of appreciation and understanding of the value of digital objects, which (when valued) become true digital assets. The challenges to these valuations are further augmented by private firms who offer platforms and systems that allow the use of digital objects, but which also control the access, transfer and usability of digital objects. Older people have a technical disadvantage to other people because they may have a lifetime of experiences that are predominantly physical than digital, and which provide a meaningful, but disappointing view of the benefits and limitations of using digital objects.

Understanding licensed access versus ownership

The results from this research point strongly towards a clash of minds in terms of digital objects and their ability to be owned. Many of the digital platforms and device spaces allocate usage that is linked to a “licence to use” rather than a digital object which is owned. In contrast, many people retain older values that align with an expectation of ownership. Older people with photos and content that is placed on Facebook believe that those digital assets are theirs to transfer, even after their death as part of a legacy attached to the digital objects that they used and accessed whilst they were alive.

Older people with e-books pass away in the belief that their loved ones will be bequeathed their books, and that the same transfer and ownership that applies to their printed books will apply to their e-books. This expectation has further misconceptions. For example, when an older person makes a choice between buying a paperback for one price, or an e-book version of the same book at 2/3rd of the price, that person does not think of the e-book as being cheaper because it is access under licence and not owned. That person thinks of it as cheaper by a third because it is not in print, and therefore there is a cost saving in terms of printing and paper. Such values are more obvious within the broader community of people who choose between buying a printed newspaper or looking at the news online. The newspaper costs additional money because it is physically in print, and is physically delivered to houses and newsagents. The consumer’s choice is made on an assumption of a cost different because of the additional cost of print on paper, and is not based on any informed conversation about the lack of ownership that is assigned to an e-book.

In a similar way, people who make choices about music may still retain the belief that they own the right of access irrespective of whether they pay the music on a vinyl record, a compact disc, or through a downloaded iTunes audio file. This research looked the associated values from older people because it assists in understanding the difference between pre-existing values of ownership with physical and tangible objects, and the misunderstood differentiation which restricts
ownership and transferability by means of private regulatory enforcement.

The value of digital objects relies on their ability to be used, accessed, transferred and owned at the times when people choose to demonstrate their rights over those objects. In cases where the access, transfer, and control of digital assets are restricted, there is an accompanying devaluation of digital objects. This is the case with digital legacies, where the restrictive practices of firms are applied. Similar to the physical objects of value in the real world, the perceived value of digital objects is reliant on the ability to pass them on to others under the conditions of transfer that we would normally assign to physical objects. Thus the more accessible, transferable, and own-able each digital object is, the greater the propensity for older people to assign a value to their digital objects as legacies that apply upon their passing.

Corporations and Private firms must recognise the Will of older people who wish for their digital content to live beyond their grave. When corporations take control of digital content through the imposed limitation of access to digital legacy content, they prevent the legacy wishes of older Australians.

When a person dies, the access to their digital objects on many social media platforms, cloud services, and digital devices is restricted. This often leads to the inheritors of digital objects being prevented from accessing their rightful inheritance. This is because of the inflexibility of corporations to allow the flow of digital content beyond the assigned identity management of their products. The restrictive practices of social media platforms and digital storage services are responsible for older Australians taking a diminished view of digital content.

When an older person realises that an e-book cannot be transferred to a digital heir, then the e-book loses value. Older people desire to bequeath their libraries (including digital libraries) as a way of being remembered to others. When an older person realises that their photos, videos and comments on social media can no longer be shared with others, then their social media content loses its value. When an older person bequeaths a digital device such as a phone or tablet to an heir, they fully expect that the device includes their valuable digital content in the form of images, words, and memories. These realisations by older people are the result of understanding that their digital objects are unfairly removed from their control when they die. These restrictive practices are included in the terms of service and licence agreements of private firms, but are not understood in terms of their digital legacy implications until it is too late.

RECOMMENDATIONS

Digital Legacy Legislation and Reform

Based on the findings of this study, the researchers recommend that governments create new legislation that provides for the transfer and access to the digital content of a deceased person’s estate by a nominated heir.

The research findings of this study underpin that there is an inadequacy in the existing laws, policies, rules, and guidelines for managing a person’s digital afterlife. This finding suggests the need for a change to legislation allowing greater ownership and transfer of digital objects, digital content and online accounts after death. New legislation should incorporate laws associated with digital legacies pertaining to different digital objects, digital content, and online accounts. Where an Australian user of digital objects nominates an heir to have access to objects in the form of images, videos, and words belonging to the deceased, that access should be enforced to all providers of digital media platforms, cloud services and device systems that otherwise deliberately prevent the intended transfer of those digital objects.

New changes to legislation can be updated in End User Licence Agreements (EULAs) and Terms of Service (ToS). Licence agreements should clearly and boldly explain the implications of digital content loss as part of digital legacy rules. Any user of such a private system should be making an informed consent decision rather than indicating implied consent through a one-click acceptance of a lengthy, wordy and technically complicated explanation of rules.

REFERENCES
