Digital Directive Design Toolkit

Principles for Building Safe, Simple, and Respectful Features for Posthumous Management of Online Accounts

Version 1.0

Olivia Erickson and Cecilia Donnelly Krum

ASPEN TECH POLICY HUB

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Contents

Introduction

Our online lives don't end when our physical lives do. As more of our lives have moved online, our accounts and online selves continue in a digital afterlife following our deaths. This paper introduces a toolkit for companies building software applications that want to allow their users to manage their digital afterlives more effectively, and for teams who want to lead these initiatives.

In this toolkit, we outline three principles to guide the development of end-of-life features: safe, simple, and respectful. Every platform or app that stores user accounts should be ready to handle the deaths of their users in accordance with these principles. Depending on the services you offer your users, your digital afterlife features might fall into one of three categories: deactivation, memorialization, or stewardship.

Account Deactivation | Memorialize Profile | Data Stewardship
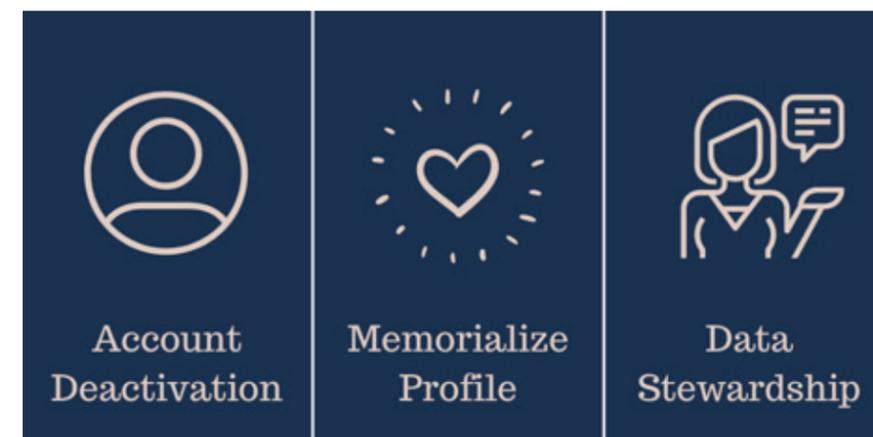
Digital Afterlife Principles

In 2019, the UN's International Telecommunications Union (ITU) estimated that 4.1 billion people worldwide were online,[1] including 90% of Americans.[2] This suggests that the roughly 2.8 million Americans who die every year[3] will have digital assets and online accounts that their survivors will need to close or transfer. Some platforms, like Facebook and Google, have implemented features that allow users to specify what they'd like to have happen to their accounts upon their death — for example, whether they'd like their profile to be memorialized or deleted.

However, many other platforms that store or handle sensitive information lack any kind of public-facing documentation about how to access or close a loved one's account. Platforms with user accounts should have a feature to allow a verified fiduciary agent to send the software a notification of a user's death, and most should also have options for managing the data belonging to the deceased user. This toolkit is designed to help developers improve their platforms by adding these digital afterlife features.

The unifying principles that should guide the design of digital afterlife features are safe, simple, and respectful. The first principle, safe, protects user privacy during life and after death. Currently, creating a digital estate plan often requires a user to share their password with their loved ones or a fiduciary agent. This is insecure and often violates a platform's terms of use or privacy policies. Platform makers should create a safe process to allow users to plan for what happens to their data after death without compromising their privacy.

Settling an estate after a loved one's death generally takes about a year.[4] Sorting out physical assets is difficult enough; we believe that closing on-line accounts and distributing digital assets should be as simple as possible. Platforms can comply with this principle by giving survivors clear instructions for closing an account and/or transferring assets.

Finally, best practices from other fields suggest that digital remains must be treated with dignity, just as physical human remains are.[5] The respectful principle states that platforms should adhere to the wishes of the deceased and disallow certain activities on the profiles of deceased users.

Different platforms have different requirements when it comes to planning digital afterlife features for posthumous user management.

1. *Deactivation features*, the most widely applicable, allow loved ones to close an account, delete or transfer its data, and/or hide the profile from public view.

2. *Memorialization features* alter the look of the account to indicate that the account holder has passed away.

3. *Stewardship features* allow a survivor to act in place of the account holder for certain tasks, generally to curate a mourning community or carry on the deceased user's work.

In this toolkit, we explain the driving factors behind each of the principles, and provide guidance on how to evaluate, choose, and build the three types of features.

DEFINITIONS

ACCOUNT HOLDER: The user of an online service who created an account while still alive. 'Account holder' also refers to the decedent (deceased person) if the user passes away and leaves an account open.

DIGITAL DIRECTIVE: An instruction or decision made by an account holder that indicates how they want their information to be managed after they pass away.

STEWARD: The next-of-kin, survivor, fiduciary, or beneficiary of the account holder. The person who has been designated to manage the account after the account holder has passed away.

Digital Directive Design Toolkit

Digital Afterlife Design Principles

Because grieving individuals are often resolving an estate in a highly emotional time, the digital afterlife features that you integrate into your platform — including the user flow, text, and system design — should be **safe**, **simple**, and **respectful**.

SAFE
Safe features respect the autonomy and privacy of an account holder, before their death and after. Such features should:

▸ Allow users to make their own choices about what will happen to their data and other assets after their death.

▸ Preserve account privacy and security before and after a user passes away.

▸ Not force account holders to share passwords, even with a trusted fiduciary.

▸ Secure the privacy of other users who communicated with the account holder before the account holder's death

SIMPLE
Features that are simple to use are more likely to be adopted by account holders and provide stewards with a more straightforward process in managing their loved ones' digital estates. Grieving people want to be able to manage the estate of their deceased loved ones as quickly and easily as possible, and digital assets are no exception. The process of closing an account or transferring digital assets, like photos or money, should be fast and intuitive for the survivor. To the extent possible, avoid requiring submission of documents by postal mail or fax by allowing survivors to upload supporting documents directly through your online application.

RESPECTFUL
Designing features for stewardship of an account should adhere to the wishes of the deceased and consider the needs of the survivors. The following are considerations for building respectful features:

▸ Ethical guidelines suggest that survivors should not be able to digitally reproduce elements of the deceased's behaviors or person without their explicit consent before death.

▸ Survivors need to be able to complete tasks efficiently. applications built for account stewards should be designed to respect the time, emotional state, and resources of stewards.

▸ Use compassionate language.

▸ Offer stewardship features as part of a platform's standard feature set, not as a premium add-on.

▸ Discontinue the use of advertisements on the public profile of a deceased person.

Verifying a Reported Death

As discussed in "Deactivation Features," your platform will need to accept reports of death in order to deactivate and/or memorialize accounts. Unfortunately, it is possible that some reports of death will be incorrect or malicious, so your platform must be prepared to verify them.

In order to make death reporting accessible to as many of your users as possible, avoid requiring death certificates and court orders, which can be expensive and time-consuming to procure. These are good options to include for those stewards who have them available, but if possible, offer an option for the steward to submit an obituary or news story that verifies the death.

Regardless of which verification method you choose, be aware of the potential for fraud. Altering an online obituary or submitting a screenshot of altered text is relatively simple. For people with common names, altering an obituary might not even be necessary. Do not be fooled by an obituary for a different person[6] with the same name. Check the date on the obituary and the age of the deceased person to make sure it matches the account holder.

Finally, always send a verification message to the account holder and wait a defined amount of time (likely at least three days) before completing the request. If you know that people usually use your platform once a week or once a month, consider waiting for that length of time before deactivating the account.

Also consider having multiple processes that result in a faster deactivation. For example, if a request contains a court-issued piece of evidence that a user is deceased, that process could be faster than a request that only contains a single link.

Digital Afterlife Feature Types

Platforms should consider which of the following feature categories are most appropriate to follow after an account holder passes away. Offer one of these levels of account management after an account holder's death has been verified, respecting the directive that the user made before they passed away:

1. *Deactivation:* The account is closed and the assets are no longer available. For some platforms, it may be desirable to offer a process to transfer assets (for example, photos or cryptocurrency) to a steward or legal executor before closing the account.

2. *Memorialization:* The account is clearly marked to indicate that the account holder has passed away. The profile may be locked or certain actions (e.g., adding a Facebook friend) may still be allowed to give friends opportunities to share memories of the deceased on the platform.

3. *Stewardship:* A steward, determined in advance by the account holder or based on legal rights, has the power to use the account in a limited capacity. These powers generally do not include the ability to read private messages or impersonate the deceased account holder.

Different platforms will require different levels of memorialization and stewardship features. Most online profiles might only need basic deactivation, where others should add a memorialization option, and a few may need to offer full stewardship. Which features are incorporated should be based on how account holders and other users interact with the platform, and how important the deceased user's public profile (if any) may be to other online users. Even those ac-

counts that are critical, like accounts that hold financial or health-care records, can be managed with the "deactivation" option. For these accounts, and even for records that may hold sentimental value, it is helpful to include an export option as part of the deactivation feature. The flowchart below is provided to help determine an appropriate feature type.
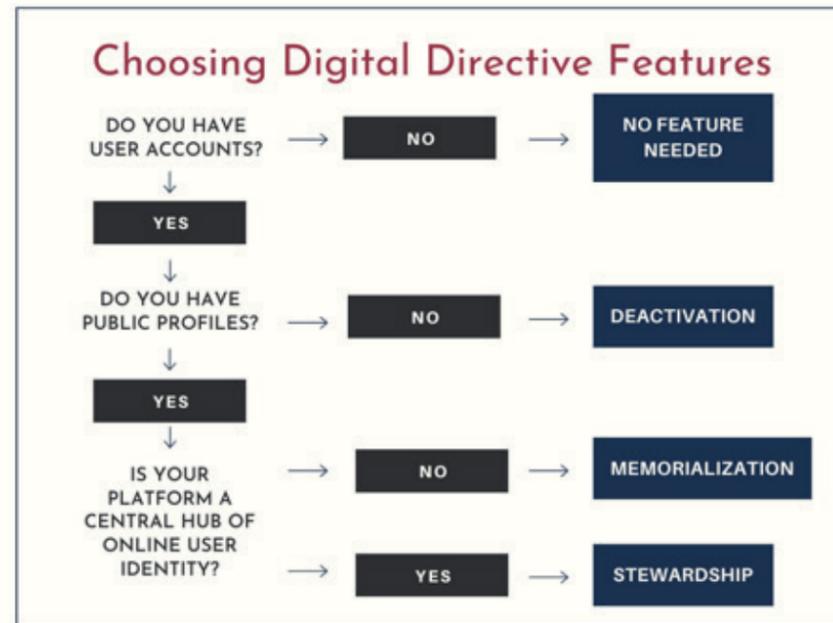
Platforms may benefit from offering multiple options for users to choose from when setting a digital directive. For example, one user may want to specify that an account should be deleted after death, while others may prefer to allow a different user to continue to operate a memorialized profile on their behalf.[7]

DEACTIVATION FEATURES

Deactivation refers to the process of closing and deleting a user's account after they pass away. Currently, most platforms require stewards to undertake one of the following methods to deactivate an account after the account holder's death.

Not recommended:
1. Digital impersonation: The steward must know the username and password in order to log in and close the account.

2. Physical impersonation: The steward must have the deceased's phone, be able to unlock it, and use it to close the account.

These first two (different types of impersonation) violate the safe principle, since they are indistinguishable from an attacker performing the same actions. It also may result in someone other than a desired fiduciary agent having the ability to act counter to the account holder's wishes.

Recommended:
1. Support message: The steward can communicate with the platform's support team to have an account closed or a profile taken down or memorialized.

2. Reporting form: The steward can use an online form to verify the account holder's death and have the account closed or memorialized, or to be named as the steward.

These methods are safe (when implemented correctly), but the automated form is simpler and is preferred over requiring the steward to go through regular customer support channels to request an account closure. With either option, remember to use compassionate language and always provide the steward with a way to reach a support person directly during the process.

Many account types will have data that a steward might want to access after the account holder passes away. This data could be financial information or family photos. If at all possible, allow the account holder to choose how much (if any) of their data to share after their death. See the "Sample Workflows" appendix for a simple version of this choice.

MEMORIALIZATION FEATURES

Memorialization features put a public profile into a state where it clearly indicates the user is deceased. By creating a memorialized state for public accounts, friends and family can use the page as a way to share memories and grieve. These features often include methods of restricting access so that the account cannot be used for fraudulent purposes or taken over for malicious purposes.

Not recommended:

1. Keeping the deceased user's profile active but not making it clear that the user has passed away.

2. Allowing anyone, regardless of their relationship to the account holder, to request memorialization of an account.

3. Automatically converting inactive accounts to a memorialized state.

Recommended:

1. Providing account holders with the ability to select whether or not they'd like their account to be memorialized after their passing.

2. A clear, respectful header or icon that uses compassionate language to indicate the profile is in a memorialized state.

3. Allowing an authorized user to select or pin a message to the account holder's profile page.

STEWARDSHIP FEATURES

Stewardship features allow an account to be taken over by an agent authorized to act on behalf of a decedent. This is generally a desirable feature for accounts where the public-facing profile of an account user has high sentimental value and may require maintenance.

Not recommended:

1. Allowing a steward to act fully as the account holder, without a clear indication that the original account holder has passed away.

Recommended:

1. Giving account holders the ability to specify how much access a steward should be given.

2. Creating an easy way for other platform users to understand who is acting as the steward of a deceased account holder.

3. Allowing the steward to confirm or deny their appointment before the account holder passes away and informing the account holder of the steward's decision.

Facilitating User Directives

Regardless of which features your platform offers, we recommend offering users options about what should happen to their account when they pass away, and providing a clearly defined default option.

1. Close/delete account

2. Transfer assets

3. Choose a steward

Evidence suggests that most people have not taken advantage of Facebook's Legacy Contact and Google's Inactive Account Manager, but research shows that users like to have the ability to plan their digital afterlife.[8] In addition, in most states, a directive an account holder gives the platform (through a feature like Legacy Contact) takes precedence over any directive in their will or other document.[9] It is also a good idea for a platform to provide clear documentation about what to do with the account holder's data after death, along with a clearly marked default behavior that will happen in the absence of a pre-existing decision, in order to avoid legal challenges from the families of account holders. See the "Sample Workflows" appendix for an example.

Endnotes

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About

The Digital Afterlife Project is an Aspen Tech Policy Hub project created by Liv Erickson, Cecilia Donnelly Krum, and Matthew Schroeder. Our work aims to improve the process by which people and their surviving loved ones can manage digital estate planning by encouraging online platforms to provide mechanics for digital inheritance as part of their own account policies.
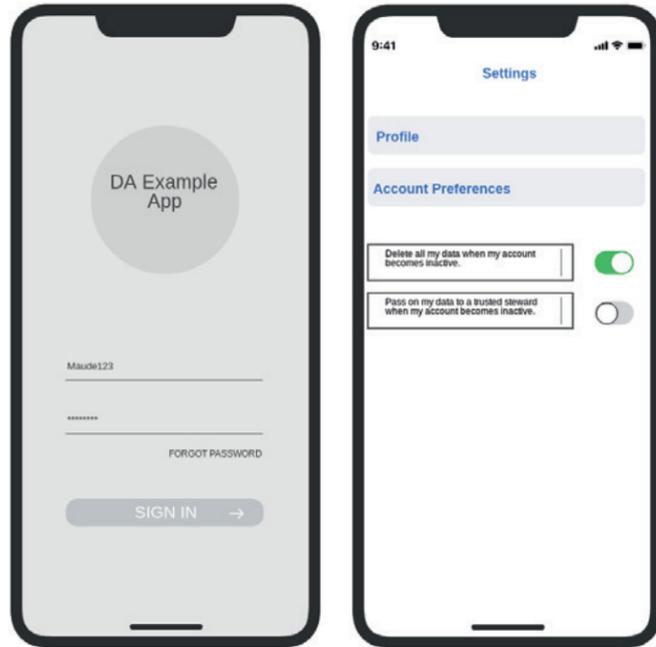
Learn more about the project and how to get involved: https://www.digitalafterlife.online/
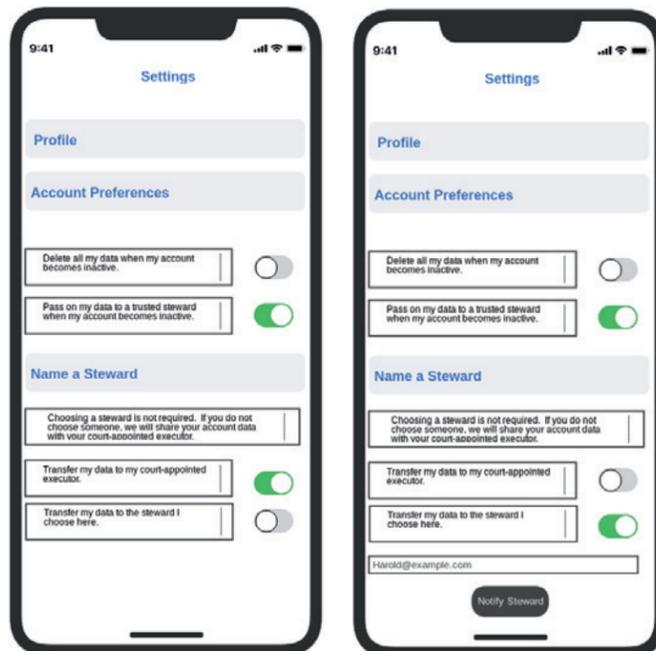
Acknowledgments

Appendix: Sample Workflows

Creating a Digital Directive Account Feature

Setting a Steward

Appendix: Digital Directive Principles and Checklists

SAFE

Allow users to make their own choices about what will happen to their data and other assets after their death as much as possible. Preserve their privacy and security before and after they pass away. Do not force them to share passwords, even with a trusted fiduciary. Secure the privacy of people they communicated with before their death.

SIMPLE

Grieving people want to be able to manage the estate of their deceased loved one as quickly and easily as possible. Digital assets are no exception. We believe that closing an account or transferring assets like photos or money should be fast and intuitive for the survivor. To the extent possible, avoid requiring extra trips to the post office or to a place that has a fax machine by allowing survivors to upload supporting documents directly in your application. Let your users trust each other—offer open-ended abilities as much as possible.

RESPECTFUL

Stewardship design should adhere to the wishes of the deceased and consider the needs of the survivor(s). Ethical guidelines suggest that survivors should not be able to reproduce the deceased without their explicit consent before death. Survivors need to be able to complete tasks efficiently: we believe design of stewardship features needs to respect the time, emotional state, and resources of stewards. Use compassionate language. Offer stewardship features as part of your standard feature set, not as a premium add-on. If part of your site includes public profiles, do not show ads on the profile of a deceased person.

BEGINNER CHECKLIST

SAFE
☐ A steward has a way to close an account without knowing the deceased's password

☐ A steward does not have access to an account before an accountholder passes away

☐ An invalid steward cannot close an account for a living accountholder

☐ An invalid steward cannot close an account for a deceased accountholder

☐ An account is closed after the accountholder is reported deceased

SIMPLE
☐ A steward can report a death

☐ A steward can validate that they are the next-of-kin

RESPECTFUL
☐ Ads do not appear on memorialized profiles

☐ All accounts can access stewardship features (if any)

☐ Text offers condolences

INTERMEDIATE CHECKLIST

SAFE
☐ A steward has a way to transfer assets from a deceased's account without knowing their password

☐ An accountholder has a way to designate a steward or beneficiary for their account

SIMPLE
☐ A steward can locate the deceased's account with minimal information

☐ Accountholders have clear instructions on what information to communicate to their chosen steward about the account

RESPECTFUL
☐ Text refers to the deceased in a compassionate way

☐ A public profile has a "memorial" or "in memory" or "remembering" version

ADVANCED CHECKLIST

SAFE
☐ An account is available to the steward after the accountholder is reported deceased

☐ Certain account features or abilities can be transferred to a steward after validation steps

☐ An accountholder has a way to designate multiple stewards or beneficiaries for different aspects of their account

SIMPLE
☐ A steward can locate information about their role's responsibilities and restrictions before the death of the accountholder

☐ An accountholder can make specific choices about how to preserve or delete specific types of data they created in the application

RESPECTFUL
☐ Stewards and accountholders can configure postmortem data settings together

☐ Stewards can appeal for more abilities or permissions

☐ A steward's identity is visible to the accountholder's connections

☐ Account changes or actions are clearly attributed to the steward (instead of the accountholder) when appropriate

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