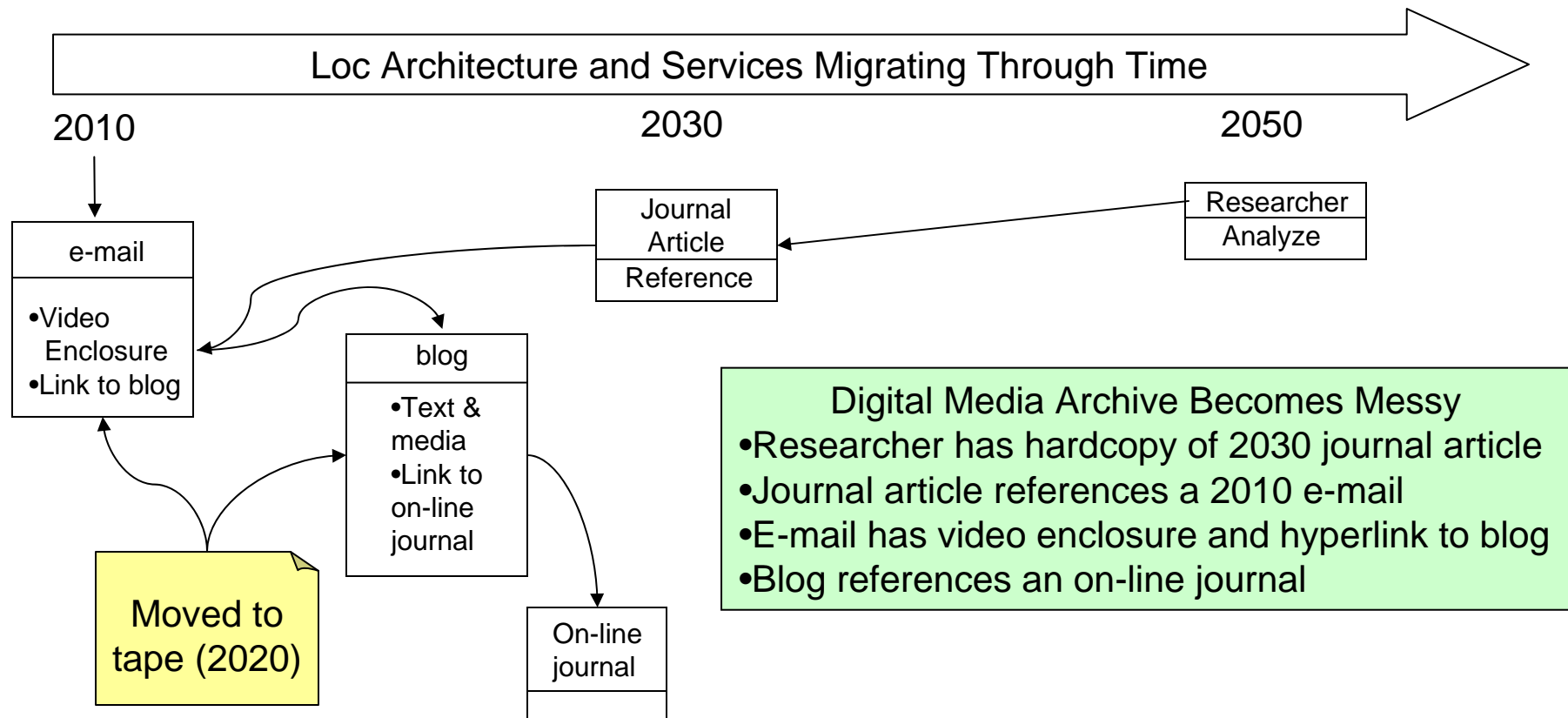


#5. Some of the system concerns arising from the long-term preservation of digital information

- Module 5: Technical Migration -- With physical media, such as The Constitution, archiving is concerned with the preservation of the physical media. In the digital world, media becomes obsolete in a relatively short period of time. We examine concerns associated with preserving digital information for centuries.

Scenario: What Will We Do?



Digital Media Archive Becomes Messy

- Researcher has hardcopy of 2030 journal article
- Journal article references a 2010 e-mail
- E-mail has video enclosure and hyperlink to blog
- Blog references an on-line journal

How will a LoC repository provide services to identify, analyze and synthesize the information?

Some Brainstorm Scenario Issues

- Much of “*human knowledge* and the *creative work* of the American people” is incorporated via a variety of references and links
- What do we preserve?
 - All (what does this mean) of the information
 - If not all (whatever that means) information what is our decision criteria for what to preserve
- Barriers to extraction of rich media:
 - Physical devices to read digital data on media
 - Errors on the physical rendering it unreadable
 - Incompatibilities
 - Operating system upgrades incompatible with media reader
 - Applications to interpret and present the digital information incomprehensible
 - Upgrades to middleware may be incompatible with digital information

Goals for the Architecture to Satisfy (Think of Needs Flowing Through Time)

- “make this **material** available ...[so that it is] useful to the lawmakers”
- What is the **material** we must make available? The digital information? Hardcopies of the digital information? Both? How do we process the links?
- Interesting new material properties impact architectural decisions
 - Historically, media preservation preserved information; information could be copied
 - Media preservation isn’t as significant, especially if it isn’t possible to extract the information from the media
- Dealing with rich media: display of digital media requires OS, middleware and application compatibility with the digital information (e.g. the environment) and the ability of physical devices to read that media

A disciplined approach to creating a LoC architecture that is adaptable through time is essential