Persistent identifiers

- Recent or ongoing PI projects and initiatives
  - CLARIN (Common Language Resources and Technology Infrastructure) project
    - http://www.clarin.eu/
    - Pan-European effort to make language resources available and usable
    - Work on PIs is part of this project
  - DRIVER Project
    - https://issue.guidelines.driver.research-infrastructures.eu/wiki/UseOfPersistentIdentifiers
    - Guidelines on PIs under development
  - DANS (Data Archiving and Networked Services)
    - http://www.dans.knaw.nl/en/projectenpagina/bri/
    - SURF-funded project completed August 2008
    - In cooperation with SurfShare, a national infrastructure is being rolled out in the Netherlands for registration and resolving of persistent identifiers. Achives can assign persistent identifiers locally within their own systems. A central system will collect these data through existing OAI-PMH interfaces.
    - Uses URNs
  - Knowledge Exchange persistent identifiers strand
    - https://www.surfgroepen.nl/sites/surfshare/public/pid/default.aspx
    - Initiative to bring together parties that have already begun, or are about to begin, work at national level on PIs and who have agreed on URNs as the basis for these national-level developments.
    - Current partners in Belgium, Denmark, Germany, Netherlands, Sweden and UK
  - PILIN project
    - https://www.pilin.net.au
    - Part of the Australian ARROW programme (in collaboration with National Library of Australia)
    - Developed a model for identifiers and their management and a shared, standards-based management infrastructure for identifiers
    - National Library of Australia expected to take this forward to a national service
  - RIDIR (Resourcing IDentifier Interoperability for Repositories) project
    - http://www.hull.ac.uk/ridir/
    - University of Hull
    - Investigated interoperability issues for repositories with respect to identifiers and produceed a demonstrator
  - SURFshare persistent identifiers – global resolution
    - https://www.surfgroepen.nl/sites/surfshare/public/software/pihandler
    - Proposal for a Global resolver: collaborators Norway, Sweden, Finland, Netherlands, Johns Hopkins University, University of California at Berkeley
    - Working proof of concept developed
- Standards
  - ARK (Archival Resource Key)
    - http://www.cdlib.org/inside/diglib/ark/
    - A URL-based schema, developed at the NLM and maintained by the CDL (California Digital Library)
    - Identifies digital and analogue (physical) objects
    - Since 2001
  - DOI (Digital Object Identifier)
    - http://www.doi.org/
    - International DOI Foundation (IDF)
    - Used extensively by journal publishing industry as the standard identifier system
    - Uses the Handle system as resolver
    - Since 1998
  - Handle
    - http://www.handle.net/
    - Developed by CNRI (Corporation for National Research Initiatives) and DARPA (Defense Advanced Research Projects Agency) in the US
    - Conforms with URN system
    - Basis of DOI but also used separately
    - Since 1994
  - INFO URI
    - http://info-uri.info/registry/docs/misc/faq.html
    - A type of URI (see below). Establishes persistence by bringing together resources that use different types of identifier
  - ISBN/ISSN (International Standard Book/Serial Number)
    - http://www.issn.org/
    - http://www.isbn.org/standards/home/isbn/international/index.asp
    - A type of URN
    - Standard unique identifiers used by publishers for books and serials. Journals, monograph series, annuals and year-books are assigned ISSNs rather than ISBNs
  - ISTC (International Standard Text Code)
    - http://www.ISTC-International.org/
    - Unique identifier for textual works (in various versions)
    - ISO Standard 21047
    - Bowker and Nielsen appointed as registration agencies 9th January 2009
  - OpenURL
    - http://www.oclc.org/research/projects/openurl/default.htm
    - ANSI Standard Z39.88
    - Maintained by OCLC
    - A type or URL containing metadata that enable link resolvers to point to resources in libraries
  - PURL (Persistent URL)
    - http://purl.oclc.org/
    - Resolver service for URLs
    - Developed and maintained by OCLC
  - URI (Universal Resource Identifier)
    - http://www.w3.org/Addressing/URL/URI_Overview.html
    - Also often called Uniform Resource Identifier
    - May be a locator (like URL) or a name (like URN) or both
    - Other PI systems may be based on the URI framework
  - URL (Uniform Resource Locator)
    - http://tools.ietf.org/html/rfc1738
    - A type of URI
    - Specifies the location (web address) of an identified digital object
  - URN (Uniform Resource Name)
    - http://www.persistent-identifier.de/?lang=en
    - Umbrella system that can accommodate any existing identifier system (e.g. DOI)
    - Designed to keep system costs as low as possible
    - Describes entities, not locations
    - Since 1992
  - UUID (Universal Unique Identifier)
    - http://en.wikipedia.org/wiki/UUID
    - An Open Software Foundation standard. Used by Oxford University repository for objects within the repository