# UDFR Use Cases

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## Actors

1. registry **administrator** - maintains the registry software and hardware system
2. registry **user** - uses the registry information
   1. human users
   2. software and tools, e.g. format identification tools, registry software
3. registry **editor** - can add or edit registry records
4. registry **system** (the UDFR software)
5. registry **organization**

## Enter information into the registry

## Export information from the registry

## Search the registry

### Search the registry for file formats

* Input
  + Individual search elements
    - free text string (simple search)
      * matches any of: name, description, version, aliases, identifiers
    - file extension
    - format name
      * part or full name, don't need to include versions
      * leave blank to list all formats
    - PRONOM Unique Identifier (PUID)
  + Combination search elements
    - 1 (file formats by support date)
      * support type, one of: supported, unsupported
      * date (day, month, year)
    - 2 (file formats by release date)
      * date comparison operator type, one of: before, after, between
      * date (day, month, year)
    - 3 (file formats by risk)
      * format genre, one of: all, audio, database, email, GIS, image (raster), image (vector), page description, presentation, text (unstructured), text (structured), text (markup), text (wordprocessed), video
      * risk comparison operator type, one of: over, under
      * risk value
* Output
  + HTML page with result list; link to XML file containing a PRONOM-Report for all the results; link to a CSV file for all the results
  + Each of the results in the HTML result list contain:
    - Format name and version, linking to summary page for the format listing all its metadata
  + Format summary: HTML web page containing:
    - name
    - version
    - other names (aliases)
    - identifiers
      * type (PUID, MIME, Apple Uniform Type Identifier)
      * values
    - family
    - classification
    - disclosure
    - description
    - orientation
    - byte order
    - related file formats
    - technical environment
    - released
    - supported until
    - format risk
    - developed by (organization)
    - supported by (organization)
    - source (organization)
    - source date (date)
    - source description
    - last updated (date)
    - note
  + XML PRONOM-Report for a format, contains:
    - format ID
    - format name
    - format version
    - format aliases
    - format families
    - format types
    - format disclosure
    - format description
    - binary file format
    - byte orders
    - release date
    - withdrawn date
    - provenance source ID
    - provenance name (organization)
    - provenance source date
    - provenance description
    - last updated
    - format note
    - format risk
    - technical environment
    - file format identifiers
      * identifier
      * identifier type
    - developers
      * developer ID
      * developer name
      * developer compound name
    - external signatures
      * external signature ID
      * signature
      * signature type (File extension)
    - internal signatures
      * signature ID
      * signature name
      * signature note
      * byte sequence
        + byte sequence ID
        + position type
        + offset
        + max offset
        + indirect offset location
        + indirect offset length
        + endianness
        + byte sequence value
    - related format
      * relationship type (Has priority over, Is previous version of)
      * related format ID
      * related format name
      * related format version
    - compression type
      * compression ID
      * compression name
      * compression version
      * compression aliases
      * compression families
      * description
      * lossiness
      * release date
      * withdrawn date
      * compression documentation
      * compression IPR
      * compression note
      * compression identifier
        + identifier
        + identifier type
      * developer
        + developer ID
        + developer name
        + developer compound name
    - format properties
      * format property
        + property name
        + property description
        + property type
        + property risk score
        + property high risk
        + property value description
        + property risks
    - search criteria
  + CSV file for a format, contains:
    - format name
    - format version
    - other names
    - identifiers
      * type
      * identifier
    - format families
    - classification
    - disclosure
    - description
    - technical environment
    - orientation
    - byte orders
    - related file formats
    - release date
    - withdrawn date
    - developers
      * developer ID
      * developer name
    - support
      * support ID
      * support name
    - provenance source ID
    - provenance source name
    - provenance source date
    - provenance description
    - last update date
    - format note
    - documents
      * document ID
      * display text
      * document type
      * availability
      * availability note
      * authors
        + author ID
        + author name
      * publication date
      * title
      * publishers
        + publisher ID
        + publisher name
      * document identifiers
        + type
        + identifier
      * document rights
      * document note
    - external signatures
      * signature ID
      * signature type
      * signature
    - internal signatures
      * signature ID
      * signature name
      * signature description
      * byte sequence
        + position type
        + offset
        + byte ordering
        + value
      * compression types
        + compression ID
        + compression name
        + compression version
        + compression other names
        + compression identifiers

type

identifier

* + - * + family
        + description
        + lossiness
        + release date
        + withdrawn date
        + developers

developer ID

developer name

* + - * + support

support ID

support name

* + - * + compression documentation
        + compression rights
        + compression note
      * character encodings
        + encoding ID
        + encoding name
        + encoding version
        + encoding aliases
        + encoding identifiers

type

identifier

* + - * + family
        + description
        + code page
        + code unit width
        + encoding form with
        + release date
        + withdrawn date
        + developers

developer ID

developer name

* + - * + support

support ID

support name

* + - * + encoding documentation
        + encoding IPR
        + encoding note

### Search the registry for software

* Input
  + Individual search elements
    - free text string (simple search)
      * matches any of: name, description, version, aliases, identifiers
    - PRONOM Unique Identifier (PUID)
    - software name
      * part or full name, don't need to include versions
    - vendor name
  + Combination search elements
    - 1 (software by support date)
      * support type, one of: supported, unsupported
        + A search for supported components will include all software products or file formats which do not have a "support end" date determined yet, and all software products or file formats which have a "support end" date which is later than the date you entered.   
          A search for unsupported components will include all software products or file formats which have a "support end" date which is determined and is before the date you entered, as well as software products or file formats that were released after the date you entered.   
          Components which have had support withdrawn from them, but on an unknown date in the past, will appear in all searches, except those for components supported on a date in the future.
      * date (day, month, year)
    - 2 (software by release date)
      * date comparison operator type, one of: before, after, between
        + Any software product or file format whose release date is unknown will not be included in the results.   
          The results of searches for components released after a given date will include components released on the given date as well.   
          For searches for components released between two dates, the second date should be the same as, or later than, the first date. Components released on either the first or second date will also be included in the report.
      * date (day, month, year)
    - 3 (software compatible with file formats by file extension)
      * file extension
      * software support type, one of: all, supported, unsupported
      * software role, one of: process in any way, create, render, identify, validate, extract metadata from
    - 4 (software compatible with file formats by file format name)
      * format name
        + part or full name, don't need to include versions
      * software support type, one of: all, supported, unsupported
      * software role, one of: process in any way, create, render, identify, validate, extract metadata from
* Output

### Search the registry for compression type

* Input
  + Individual search elements
    - free text string (simple search)
      * matches any of: name, description, version, aliases, identifiers
    - PRONOM Unique Identifier (PUID)
  + Combination search elements
* Output

### Search the registry for encoding type

* Input
  + Individual search elements
    - free text string (simple search)
      * matches any of: name, description, version, aliases, identifiers
    - PRONOM Unique Identifier (PUID)
  + Combination search elements
* Output

### Search the registry for hardware

* Input
  + Individual search elements
    - PRONOM Unique Identifier (PUID)
  + Combination search elements
* Output

### Search the registry for vendors/organizations

* Input
  + Individual search elements
  + Combination search elements
    - 1 (organization by supporting product type)
      * organization name
        + part or full name, don't need to include corporate status
        + leave blank to list all organizations
      * supporting product types, one of: all components, file formats, software products, character encoding schemes, compression types
* Output

### Search the registry for migration pathways

* Input
  + Individual search elements
  + Combination search elements
    - 1 (source format to target format)
      * source format name
        + can leave blank
      * target format name
        + can leave blank
* Output