Software Engineering Group Project
Group2
Milestone2 Solution Design
First Draft
Sunday 19/May/2008
By: Mohammad Bamogaddam

Plug-ins clarification:

Now, there is already some plug-ins structure created. But it is not really used.

There is one plug-in called: 'file_monitor.rb'. It is used as a normal class (to do a specific job) not as a plug-in (notice *daemon_main()* method in *earthd* script).

So, at this stage, we will create plug-ins like *file_monitor* and use them as normal classes.

Later, when the plug-in stuff is ready we just need to change the way we are using our classes.

- ➢ Extracting metadata from files:
    - ◆ create '*rsp_metadata.rb*' (under 'lib/earth_plugins'):
        - • It should be subclass of '*EarthPlugin*'
        - • Methods:
            - ✓ *file_metadata(file)*
              Returns *Hash* of keys and values representing RSP
              naming convention. i.e. 'job name', 'sequence name' and/or 'shot name'
              Result example:
              {:job => "job_001", :seq => "seq_001", :shot => "shot_003"}
            - ✓ *directory_metadata(directory)*
              *** Ignore it for know
              Same as (1) but for directories
            - ✓ *directory_metadata_recursive(directory)*
              *** suggested. Ignore it for milestone2
              Returns *Hash* of keys + values for all files included in the given directory and its subdirectories.
              Result example:

{file1_id1 => {:job => "job_001", :seq => "seq_001", :shot => "shot_003"},

file1_id2 => {:job => "job_001", :seq => "seq_002"}}

- <u>Save metadata in the database:</u>
  - ◆ in '*file_monitor.rb*':
    - • Edit '*update_non_recursive(directory, options)*' method so that for each file it do the following:
      1. use '*rsp_metadata.rb*' plugin to extract its metadata information (in *Hash list)*
      2. save the metadata in database using '*save_metadata.rb*' plugin
  - ◆ create '*save_metadata.rb*' plugin (under 'lib/earth_plugins'):
    - • it should be subclass of *EarthPlugin*
    - • Methods:
      1. *save_file_metadata(file_id, metadata)*
         - ➢ metadata – Hash of keys + values
         - ➢ add/update the given file_id metadat information in table *(metadata)*
- <u>Search feature:</u>
  - ■ GUI:
    - ◆ add search by text box with a drop list of the possible attributes (e.g. Job, Sequence, Shot)
    - ◆ this list data should be taken from database or from a plug-in
    - ◆ In '*browser_controller.rb*'
      1. Maintain the new 'search' button action. (could be similar to current filtering stuff)
      2. Use '*rsp_metadata.rb*' plugin to search by an attribute.
  - ■ In '*rsp_metadata.rb*' plugin:
    - ◆ Add method '*search_by(key, value)*':
      Returns array of files matches the given criteria (key + value). "Use *Earth::File.find()* method"

- Database:
    - For simplicity, ignore the current tables.
        - Create new table: (use rails models NOT SQL to create it)
            - ✓ Table name -- file_metadata
            - ✓ Table columns:
                1. file_id => linked to 'id' in table 'files'
                2. attribute_key => "job", "sequence", "shot"
                3. attribute_value => job name, etc.
                4. plugin_descriptor => rsp (somthing linked to the RSP plugin)
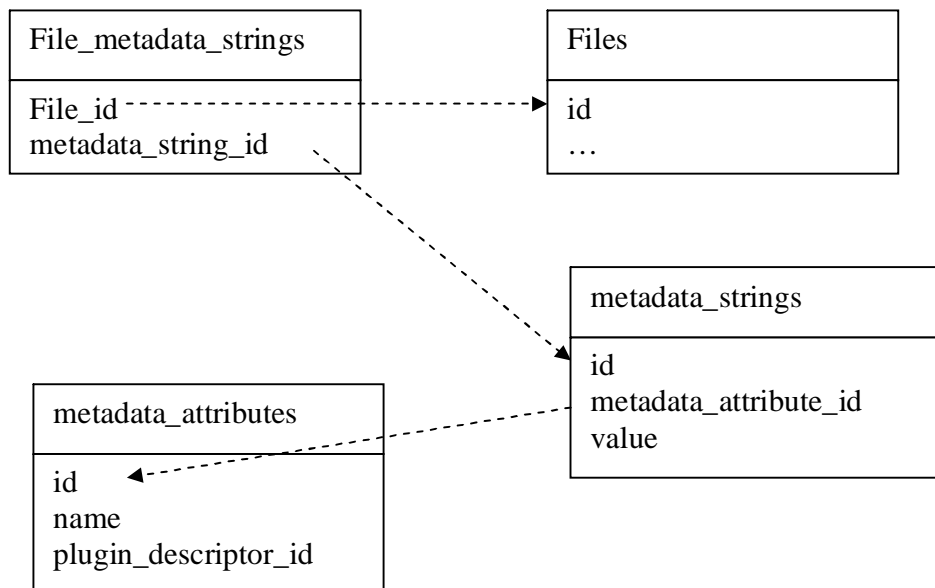   - Current tables design for metadata:

Figure 1

➢ Task Distribution:

Task	Developer	Time Estimation
Extracting metadata from files: create plug-in rsp_metadata.rb		
Save metadata: update file_monitor.rb		
Save metadata: create save_metadata.rb plug-in		
Search feature: GUI		
Search feature: update rsp_metadata.rb plug-in		
Database: create new table		