## Pipeline: metadata

```
mov mov
   specs
                           raw recording reference

■ sourcePath

     binning
                          spatial scale and position
     pixsize
                               (relative to raw)
     spaceorigin
     timebinning
                         temporal scale and position
     timeorigin and
                               (relative to raw)
     fps fps
     la history
                         what processing was applied
     history_params
                               (relative to raw)
    extra_specs
       ■ F0
       convertionDate
       framestamps_table
       framestamps_table_names
       frange_valid
                                        optional
       m hardwareBinning
       recordingDate
       allenMapEdgeOutline
       allenTransform
       mask mask
```

```
% read movie (correct specs required)
[M, specs] = rw.h5readMovie(fullpath_in);

% do stuff

% update specs as needed
specs_out = copy(specs);
specs_out.AddBinning(ns);
specs_out.AddBinningTime(nt);
specs_out.AddToHistory(functionCallStruct({'nt','ns','options'}));

% save output (correct specs required)
rw.h5saveMovie(fullpath_out, Mout, specs_out);
```

Required (and guaranteed by interfaces)

```
>>> specs.GetHistory()'
ans =

11×1 cell array

    {'convertRaw2Preproc1' }
    {'movieSimpleMoco' }
    {'movieExtractFrames' }
    {'movieExpBaselineCorrection'}
    {'convolutionPerPixelExt' }
    {'movieTimeCrop' }
    {'movieRemoveHemoComponents' }
    {'movieDFF' }
}
```

```
% copy outlines / masks between recordings
% (same animal & similar fov)
moviesCopyReference(fullpath1, fullpath2)
ol = specs.getAllenOutlines(); % for current binning, cropping, ...
ttl = specs.getTTLTrace(); % for current time cropping, ...
```

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