A new ICD for CFHTLS releases

CADC/Terapix

Based on

- Meeting at Terapix with JJ on January 7, 2006
- Meeting at Vancouver: CADC + Terapix February 19, 2006
- Visite at CADC of Frédéric Magnard, February 20-23, 2006

Needs for modifications

- T0002/T0003 release revealed complex data structures
  - STEP 1 : 9500/12600 weightmaps images have been sent to CADC + all relevant Qcontrol metadata
  - T0002 meta-data contained 1 million files
- CACD easily made images available but never succeeded in making available all meta-data in a user friendly way
- A release cannot be an official release until all metadata available at CADC
- Slew down the release process of T0002
- One issue: handling the amount of metadata and all their different filenames was a mess at CADC.
- Terapix must have the option to change the amount and the content of metada because they always improve the automated process of quality control and the quality control tools
- Both CADC and Terapix decided to move to another solution:
  - simpler to understand and to install,
  - faster to make data and metadata public,
  - easier to interact between CADC and Terapix,
  - more readable for users.
  - Easier to change the content/quality of quality control without need to change the ICD

Data processing steps

- A 3-STEP process and data level:
  - STEP1: individual image analysis and evaluation, weightmap images production (QFITS-in pages, grade+comment, FITS weightmaps , LDAC catalogues)
  - STEP2: photometric and astrometric calibration and rescaling , mono-chromatic stacks (QFITS-out, Q-assessments plots, FITS images+weigthmaps, LDAC catalogues+star/gal separation)
  - STEP3: panchromatiques data products: chi2 FITS images and weightmaps , merged multi_color catalogues+star/galaxy separation, Q-assessments plots,
  - Data delivered at different period: STEP1 early, STEP2 + STEP3 simultaneously from release candidates
  - Very Wide has a special status: no stacks done : image by image products for proper motions

STEP1

- Data transferred from Terapix to CADC:
  - 1 weightmap per QFits-ed image, name %d%c_weight.fits.fz e.g. 750581p_weight.fits.fz (RICE compressed)
  - Each image has the Terapix grade + the Terapix comment (in csv format, or else)

- Data that keep hosted by Terapix
  - Meta-data (QFITS-in output web page), accessed by users (or through CADC interface page) through a fixed URL:

http://ftpix.iap.fr/T0003/750581p/

STEP2 (monochromatic stacks)

- Data transferred from Terapix to CADC:
  - Stack image: CFHTLS_{program}_{filter}_{RADEC}_T0003.fits.fz , e.g. CFHTLS_W_g_022929-070000_T0003.fits.fz
  - Associated weight image , e.g CFHTLS_W_g_022929-070000_T0003_weight.fits.fz
  - Single filter catalogs (detection, on chi2 image, measurement on single filter image) ingested in a database at CADC (SExtractor CATALOG_TYPE ASCII_HEAD),
    e. g. CFHTLS_W_g_022929-070000_T0003.cat
  - ds9 mask CFHTLS_W_g_022929-070000_T0003.reg
  - Terapix grade/comment
- Data that keep hosted at Terapix
  - Meta-data (QFITS-out output web page, plots, .head), accessed by users through a fixed URL:

http://ftpix.iap.fr/T0003/ CFHTLS_W_g_022929-070000/ [/QF, /ColorImage, /Plots, /head, etc, TBD evolutive namelist defined and managed by Terapix, and sent to CADC each release candidate)

The basic idea is to avoid a too much detailed namelist for meta data since it may change frequently according to Terapix needs

STEP3 (panchromatic analysis)

- Data transferred from Terapix to CADC:
  - Chi2 + weight images: ,
    e.g.
    CFHTLS_W_gri_022929070000_T0003.fits.fz
- Data that keep hosted at Terapix
  - Plots, galaxy/star counts, jpeg color image
  - Merged multicolor catalogs (Or at CADC, or none?)
  - through the same URL:

http://ftpix.iap.fr/T0003/CFHTLS_W_g_022929_070000

Release creation: progressive

- STEP1 always sent early has it is done now, to make weightmaps and image evaluation public as fast as possible
- Once produced at Terapix the Deep and Wide STEP2/3 will be sent separately as 2 independent « release candidate »
- Modifications to release candidates will be done until Terapix announce data are stable
- Then the last Deep+Wide data release candidate becomes automatically a release, without need for additional transfer from Terapix to CADC
- The VeryWide as a special status: no stacks done, one swarp per image done+weightmap. Will be sent to CADC and meta-data keep hosted at Terapix