ALTWG Meeting Notes Sept 15-17, 2016

▷ Preliminary Questions
▽ Notes from Meeting
  ▽ SPC discussion
    ◉ Review of the ALTWG products
    ◉ **Very much need to develop a process for resolving differences**
    ◉ Olivier is concerned that tilt is difficult to measure
    ◉ As far as reconstructed arcs, SPC will not share those as the source of the reconstructs will be (partially) from SPC.
    ◉ Olivier showed ALTWG chart that showed assignments
    ◉ File naming convention really needs to be a RELEASE rather than actual creation date
    ◉ **IPWG May need to have an algorithm to select the correct subset maps for the 35cm and lower (Dani)**
    ◉ **AI - When you have subset maps (eg 35cm) do the vertices match exactly? (Olivier)**
    ◉ **AI - ALTWG will make the DSKs unless we determine that SPOC should make them (Ed)**
    ◉ Need to look into producing high resolution maps based on a desired center point
    ◉ **Need to ensure that SBMT is not preloaded with unofficial products (Olivier, Ray)**
    ◉ General rule of thumb is SPC accuracy is ~1.8* the ground sample distance of he imagery. (1 sigma)
    ◉ **A general warning, there needs to be a camera model incorporated into the test data set that incorporates the MTF into the Freespace data. (Eric, Kenny)**
    ◉ Meeting accuracy requirements for 5cm models through detailed survey
    ◉ **Check that detailed survey equatorial stations do not provide Polycam imagery. (ERIC)**
  ◉ OLA
  ▽ SPC and MRD Rev J Requirements Discussion
    ◉ One way to verify result in flight is to use gravity to estimate ephemeris and see if results correspond to the ephemeris
    ◉ Eric recommends a near-nadir image that has higher resolution and render from the shape model and compare.
    ◉ Olivier thinks that MRD-608 may not be possible.
    ▽ Eric proposes
      ◉ Give them a DTM and a synthetic image and let them correlate to find the images
      ◉ Measure some shadows for a vertical accuracy check
      ◉ For horizontal accuracy, refine compOBJ to set a threshold for translation
    ◉ Requirements need to be both RMS and a max
    ◉ Need to specify which camera.
    ◉ Eric proposes a retest of NFT sensitivity analysis (x2, x5, x10) with best effort shape model.
    ◉ The time to touch issue may be a red herring, since inertia of the material may slow down the s/c
    ◉ Eric thinks the best estimate 5cm model maybe done this week. We could give them the model and then say give us your answers by the science team meeting.
    ◉ Mike Daly thinks RMS may be a good measure, but over the range needed (eg 100x100 pixels)
    ◉ Need to build a shape model 4 with a taggable location. Ed needs to get Ron Mink in the call.
    ◉ Need to add the safety map team in the SPC conversation
  ▽ Day 2
    ▽ There is information in the OL2s that should allow the visualization tool to preprocess the data set and generate a image for interpreting where OLA spots land on the surface.
      ◉ The OLA team may at some point need to do some additional processing to support a more sophisticated query, but not at this time.
    ▽ SIS discussion
      ◉ A discussion on the use of planes vs individual files
      ◉ Will continue to try the multiplane approach for delivery to FITS
      ◉ **Ray will send an updated, marked up version of the SIS (Ray)**
      ◉ **Olivier will clean up the flow diagram with a description of the boxes to Kate, and Ray will send the updated FITS header docment and Kate will re-release a draft of the SIS for review. (Ray, Olivier, Kate) before science team meeting**
      ◉ **Olivier will deliver an updated OBJ and ancillary file formats to Kate to support a revision of the Map format. (Oliver)**
    ◉ Bill discussion with modeling random errors over time.
    ◉ **CSA need a guidelines document, as soon as possible (Ed, Heather)**
    ◉ **Action item is to look at grid engine status. Possible alternatives might include Maui (Ray) and investigation with (Tony)**
    ◉ **Need to get together with Bob and Eric to discuss mac cluster requirements (Bob)**
    ◉ **ALTWG will look at manpower presence and need for wired machines vs. wireless access (security is the issue) (Mike and Olivier)**
    ◉ **(Ray, Sanford, Fitz and Dave) should get together soon to discuss a revised naming convention for OLA data as part of the broader interface discussion.**
    ◉ **Assuming red-hat 2.8 Enterprise (Ed will ask tony)**
    ◉ Might want to consider 2 OPIES for ALTWG
  ▽ OLA Discussions
    ◉ Would forego Detailed survey observations, in large part, if Orbital A data is obtained.
    ◉ Would expect a slow degradation in the pump diode until the laser can't compensate, and would not change Orbital B observations
    ◉ With the variation in range for OLA, they could potentially plan to optimize for the close range
    ◉ The second method of producing OLA shapes does not depend knowledge of the spacecraft positions
    ◉ **Perhaps a safety map poster update for the science team meeting (Ed)**
    ◉ We need to make sure that for the requirements review for the top maps that members of the WGs providing inputs to the maps are present and sign off.
    ◉ The 525m passes might be needed earlier if we want OLA to verify the SPC results
    ◉ If using the NFT, then consider doing a 225 m pass with OLA while NFT is preparing their catalog.
    ◉ Would like to edit MRD-608 to eliminate the commanded vector.
    ◉ **Ray will have PS30 ready end of week of Sep 21, with a truth model a bit later. All test data inquiries will be referred to Dave Hammond. Target middle of October. (Ray)**
    ◉ **Jeff has a data set that has OLA information with Bennu spice that can be used to work out what a patch on the surface looks like for the visualization tool testing. (Dave, Olivier, Jeff)**
    ◉ **Should NAIF should generate the DSKs (Damian, John Kidd)**
    ◉ Hannah will provide a roughness poster for the STM, also James for one on combined OLA/SPC products
    ◉ Ed will investigate the process for using the smithed kernals for general mosaic making. (This is a discussion.)
    ◉ When topography and base maps don't line up, people start having big dissuasions that should be avoided. It doesn't matter with the point products.
    ◉ Might be useful for an ALTWG OPIE generates a CK, then make those an input to the IPWG OPIES to test the project
    ◉ Early November for a ICD Meeting with Banfield, Fitz and Instrument team leads to plan update and interface to repository.
    ◉ Daly has been asked for a copy of the OLA pipeline
    ◉ Demo of getspots at the science team meeting
    ◉ ALTWG will create the blank ancillary file with the compulsory keywords — a copy of this file will be distributed to the science team rahter than letting the science team generate their own.
    ◉ **Kate will notify Banfield and Harshman to propose a simplified file naming convention. Kate**
    ◉ Kate will generate a map SIS update that includes a scaler+error and a 3-vector+error per axis.
    ◉ **ALTWG will generate an "Ultra Low" global model that comprises about 20,000 facets (Olivier)**
    ◉ **Ed puts orbital A imaging proposal on the wiki (Ed)**