# General direction

- Aimed at low skills, low knowledge, time-to-time users.
- Offers wizard mode and minimum clicks work flow.
- Clear wording and instructions.
- Fast operation.
- Produce bright, sharp, colorful images (solution: bump the brightness, contrast and saturation by a few percent, render in Sharper mode).
- Users will tend to overlook photographic quality if their images look ?cool?.
- Typical scenario is 3-10 images, 2-5MP each.
- Some of the images may not have EXIF or proper EXIF data (cell phone cameras, etc).
- This can be marketed as a separate product ? low cost home and small office solution; we can talk bundling here ? cameras, etc.

# Possible workflow

Step 1: Welcome to the Autopano Wizard! Select a folder or a set of images that you want to work with. (a browse box). A collapsible More options sign. Options include ?check subfolders? and ?slower processing, but better results? check boxes.

Step 2: Progress bar without terminology, just time or only a graphical bar. If none found ? prompt to return to Step 1 or exit. Show small previews of the found panos, checkbox by each of them, Render selected button. A collapsible More options sign. Options include ?save panos to? (original folders, choose); size for panos ? full size, screen size (this needs elaboration, maybe use popular photo sizes; maybe a slider for bigger file or less MB); file format (tiff, jpg should be enough); autocrop and auto color correct checkboxes

Step 3: Shows progress bar under each pano, after all are done, prompt to exit or return to Step 1. Technological requirements This implies that the engine can do all this unattended:

- Scan folders and create pano groups
- Choose proper projection, according to some logic
- Auto-detect verticals and horizontals and straighten the pano
- Choose proper color correction and do brightness, contrast and saturation adjustments
- Crop the pano to usable pixels
- Distort the pano to fill the rectangular shape nicely (similar to Photoshop?s Distort) (may be a nice marketing feature for next version)
- Do batch rendering and remove ghosting

# Technical considerations *via GURL*

- The fast operation could be achieved by imposed limit on the number of source images and/or output size. 100MP limit should allow for 40" x 20" (120 x 60 cm) @ 300 DPI print.
- Only JPG files - no RAW, TIFF, etc.
- A UI control with several (three?) positions for quality of detection and optimization. By default APL should produce an usable result quickly; if the user is not satisfied with the preview - let them rerun the process, maybe something similar to "Auto Fine Tune" - local geometry analyze on links with bad rms, remove bad rms points, etc.

- Bigger images/project should be detected at lower settings for faster result, then fine-tuned.
- Select projection mode using the GURL logic
- White balance, color, saturation and sharpen applied automatically, no levels or HRD stitching.