

## Draft Minutes

ASC OP/TF 5- Committee for Optics and Electro-Optical Instruments - Aspheric Optics

January 12<sup>th</sup>, 2012, 11:00-13:00 EST (-5:00 UTC)

Held by teleconference

### 1. Welcome and Introductions

R. Youngworth opened the meeting at 11:05 EST with introductions. On the phone were D. Aikens, R. Williamson, C. Evans, D. Howland, S. Bambrick, R. Youngworth, and R. Smythe.

R. Youngworth also discussed the issues and scope of the group, reiterating the message from August 2011 that this group will work on aspheric formalisms for standardization. Note that a number of the topics were discussed as they came up, rather than the specific order in the draft agenda. All points were discussed and documented here per the agenda ordering for the teleconference.

### 2. Adoption of Agenda

D. Aikens moved we adopt the agenda, and R. Williamson seconded the motion, which carried unanimously. The group all had access to the meeting documents that have been placed online.

### 3. Review of Action Item Status

R. Youngworth mentioned that a number of the action items were deferred until seeing the results of the 4Q11 OSA Freeform Incubator meeting and ISO international level meeting in Okinawa. After this teleconference he expected movement on residual action items and formation of new items. This topic was tabled until the end of the meeting to look at all activities at once.

### 4. Goals and TF5 Charter

This topic was mentioned in the meeting as becoming clearer with the activity at the international level in 2011.

*Holdover Action:* R. Youngworth to compose group goals and TF5 charter for guidance.

### 5. Aspheres in Standards

R. Youngworth mentioned it's important to TF5 that we understand all of the places in standards where aspherics are an important consideration. Aspheres are an important consideration in ISO 10110-12 and the new effort for freeform optics that will be -19. In addition, there is relevance for ISO 10110-8 (texture), ISO 10110-6 (centering), and ISOTR 14999-2.

D. Aikens gave an update about international activity from the Okinawa meeting. Rotationally symmetric aspheres are being handled in ISO10110-12 and will include Forbes' Q-type along with an improved slope specification. The group will provide feedback for the next cycle before its publication. A different group is spearheading the draft of ISO10110-19 and OEOSC has requested this group's participation in review for expert input (with R. Youngworth as designated lead). The new standard -19 will include all parts such as surface characteristics, wavefront, slope, tilts, and decentration. It is a specification criteria versus metrology standard. C. Evans pointed out the need for a metrology standard and suggested Dr. Kate Medicus from Optimax to start an effort. The international group has also decided to include freeform considerations in ISO10110-5 (Surface Form) and ISO10110-6 (Centration). There was quite a discussion on this idea and concerns over complicating functional standards were noted. This inclusion will likely slow down publications of updates to the standards.

The group also discussed metrology standards. It is clear that we should take a serious look at what is missing and formulate a position to ensure that the metrology of these surfaces is covered sufficiently. C. Evans spoke highly of K. Medicus as a good person to formulate a position, and R. Youngworth agreed to contact her and move such an effort forward with TF5. This effort may take the form of a new work item and be discussed at the international level. Further details on this part of the discussion are tabled until we get expert input and assessment of what is covered and not covered in the standards to discuss collectively.

*Completed since meeting:* R. Youngworth to expand outreach to include the French delegation via e-mail to M. Bray.  
*Completed since meeting:* R. Youngworth contacted K. Medicus to see if she has interest in supporting an asphere metrology standard which is sorely lacking.

*Completed since meeting:* R. Youngworth obtained version of ISO10110-19 from Dirk Jahn for the group to review.  
*Action:* ISO10110-19 to be distributed to entire TF5 group to give expert input. Per the Okinawa meeting this input should be delivered in February so the deadline for input delivered to R. Youngworth is February 28, 2012.

*Action:* ISO10110-12 to be distributed by D. Aikens for TF5 to give input on next cycle with a deadline around June 30, 2012.

*Action:* R. Youngworth to set up meeting to start metrology work and develop a plan with K. Medicus and C. Evans.

*Group Action:* Review working draft informally for ISO10110-19. This is a quick turn item due back to Germany by the end of February, driving a deadline of 27 February 2012 for feedback to R. Youngworth (ryoungworth@riyo-llc.com).

*Group Continuing Action:* R. Youngworth will start to track what is in standards and what needs to be edited or managed.

## 6. Current Formalisms

R. Youngworth asked everyone for a list of the different kinds of mathematical formalisms. A start to this list was provided by Mr. Kyle Fuerschbach, a student at Univ. of Rochester, as he tracked the information for us at the meeting. He did a nice job and results can be seen in the start to that part of the spreadsheet.

*Group Continuing Action:* R. Youngworth will compose a list of current formalisms, circulate it, and solicit further input.

## 7. Known Meetings and Activities

R. Youngworth noted that there are lots of conferences over time, particularly through SPIE, ASPE and OSA. Upcoming known conferences are tracked in the spreadsheet with additional information. The standing request for this committee is to feel free to share any additional conferences that may be of relevance. Moreover, please feel free to share information about relevant presentations and papers.

D. Aikens requested if the OSA Incubator meeting would have minutes and if so we should get a copy. R. Youngworth agreed to contact Kevin Thompson to ask. Since the meeting this has been done and there will be no meeting minutes. If a white paper is written it will be shared with standards, and input was given to Dr. Thompson on what standards is doing and what would be beneficial to our efforts.

*Completed since meeting:* R. Youngworth made inquiry about OSA Incubator meeting minutes and TF5 will receive a white paper for the meeting if one is formulated.

*Group Continuing Action:* R. Youngworth will keep a running list of known meetings and activities and circulate it. Please send information back for collation if you know of activity that is missing on the list.

## 8. Additional and New Activities

A few minor items were discussed. R. Youngworth perchance had contact through an OSA awards committee with Bernhard Braunecker, one of the authors of the "Aspherical Optical Elements" book. Professor Braunecker shared that the

original idea was to make it a true e-book with individual input and editing options. However, it was published conventionally for the time being. He specifically mentioned that US input is desired for a next step of it, and R. Youngworth told him it would be mentioned to this group.

Another issue for longer term consideration is to disseminate information from TF5 to the general community. We may want to look to present our findings and tracking of information at conferences, but clearly we are just starting and require sufficient progress before seriously embarking on such an endeavor.

## **9. Summary of New and Continuing Action Items**

Please see summary tab on the spreadsheet for official tracking. The spreadsheet takes precedence over these notes for tracking actions.

## **10. Time and place for next meeting of TF5**

R. Youngworth agreed to setting up the next meeting. OF&T was suggested, but after the meeting R. Youngworth decided a one hour conference call would be an appropriate next step. **This call is scheduled for Tuesday, 8 May 2012 at 11:00 EDT (GMT-5).** Any changes to this schedule will be sent well in advance. At that juncture additional meetings will be set up, and call information will be included with the meeting notice and agenda. The goal of that meeting will be to discuss the status of the metrology standard and the multi-tab data tracking spreadsheet that has been created.

## **11. Adjourn**

D. Aikens moved to adjourn, seconded by R. Williamson, which carried unanimously.