

**ISWP Standards Working Group**

**July 28, 2015 Meeting Recap**

The ISWP Standards Working Group met by conference call on Tuesday, July 28, 2015 from 12:00 p.m. to 1:00 p.m. U.S. Eastern Time. This document provides objectives, action items and a recap.

**Objectives**

1. Discuss funding proposal for the group
2. Discuss final design and implementation of prototypes for each subgroup

**Action Items**

1. RR and Caster subgroup to begin with design and prototyping the test equipment.

**Discussion**

1. Working Group Funding. Proposal due July 24 will include:

Mark submitted a funding proposal for \$41,000 to cover:

- In-person Working Group meeting in Pittsburgh (likely in October).
  - Expenses for materials and prototyping,
  - Design time for engineering and student internships
  - Wheelchair purchases (hoping to receive wheelchair donations to minimize costs).
- Mark to lead the monitoring of funds and payments once available to the group.

Here is schedule for second round funding proposal requests. Should be helpful for Standards WG when considering additional tests:

<i>ACTIVITY</i>	<i>ROUND 2 2015</i>
ISWP provides WGs plan, including guidelines,	<b>Mon., August 24</b>

proposal form and funding amount available.	
WGs submit proposals to ISWP.	<b>Fri., September 25</b>
ISWP forwards proposals to Advisory Board.	<b>Mon., September 28</b>
Board reviews proposals and makes funding decisions. ISWP informs WGs.	<b>Week of October 12</b>

## 2. Subgroup Updates

- Rolling resistance:
  - Final design selected - Weighted wheel rotating on a drum (torque measurement)
  - RR group to design and prototype the test and the equipment will be housed at Pitt.
  - Matt could potentially have his MIT class prototype the test.
  
- Casters:
  - Anand/Pitt group to prototype the test for rotating casters on a stationary table with slats and rugged surfaces.
  - Norm and his class students to design and prototype the angled version of same test as above with water and dirt as additional influencing variables.
  - Pros/Cons list of two tests uploaded on Gdrive.
  - Document linking environmental factors to suggested tests uploaded on Gdrive, prioritizing factors is the next step.
  
- Corrosion:
  - Pitt has purchased new corrosion test protocol standards related to corrosion fatigue, cyclic testing.
  - Need to buy standards to measure corrosion levels.
  - Don sent Mark Sullivan testing on chrome versus zinc coating of hardware. After two-three days, chrome was untouched; zinc was turning colors. Work in progress to determine fair test exposure.
  - Decide on corrosion test when the group meets at Pitt.
  
- Whole chair testing:
  - Don prefers housing U-shaped track because it will fit better into rectangular space.
  - JP suggested field results through CITE MIT to influence the design and development of the whole chair test.

- The working group considers the test as valuable and would commence work sometime early 2016.
- Field data to be available in summer of 2016.

### **Subgroups** (for reference)

- Design Guidelines: Mark Sullivan (interim lead), Daniel Martin, Jon Pearlman, Norman Reese, Chris Rushman, Eric Wunderlich
- Casters: Anand Mhatre (lead), Matt McCambridge, Jon Pearlman, Norman Reese, Don Schoendorfer
- Corrosion: Matt McCambridge, Don Schoendorfer
- Rolling Resistance: Matt McCambridge (lead), Jon Pearlman

### **Participants**

- ✓ Daniel Martin, Shonaquip
- ✓ Matt McCambridge: DEKA (formerly with Whirlwind)
- ✓ Norman Reese, LeTourneau University
- ✓ Karen Rispin, LeTourneau University
- ✓ Mark Sullivan, Convoid, Ride Designs and Polus Center (WG Chair)
- ✓ Don Schoendorfer, Free Wheelchair Mission
- ✓ Karl-Erik Westman, Handicap International
- ✓ Eric Wunderlich, LDS Church
- ✓ Chris Rushman, Motivation
- ✓ Dave Mahilo, Invacare
- ✓ Dr. Rory Cooper, University of Pittsburgh
- ✓ Anand Mhatre, University of Pittsburgh
- ✓ Dr. Jonathan Pearlman, University of Pittsburgh
- ✓ Nancy Augustine, University of Pittsburgh

Prepared by: Anand Mhatre, University of Pittsburgh