



ISWP Standards Working Group

June 14, 2017 Standards Working Group (SWG) Meeting Recap

The ISWP Standards Working Group met by conference call on Wednesday, June 14, 2017 from 12:00 p.m. to 1:30 p.m. U.S. Eastern Time. This document provides objectives and a recap.

Objectives

1. Discuss progress updates from the subgroups and related future work.

Discussion

1. Design Guidelines:
 - a. Jon and Matt will input content on testing.
 - b. Material on intermediate wheelchair service provision will be taken off.
 - c. ISWP to enlist resources for copy editing and design.
2. Caster Testing
 - a. The caster failure checklist will be evaluated for test-retest reliability with in-person and online evaluations.
3. Whole Chair Testing:
 - a. Don Schoendorfer showed photos and video of the track. Update Folder: <https://www.dropbox.com/sh/l2ctkchf5k4ftr8/AADXv5BsPv9TrcdreAs4Q5MQa?dl=0>
 - b. Features include: 20-foot conveyor, 2 ½ feet above ground with a catwalk around the perimeter. The unit has a 10 horsepower motor, and a sensor helps to keep the conveyor belt centered. An electric wench will be installed to position the wheelchair and dummy, along with safety curtains as required by OSHA. There will be longitudinal ridges every 8 feet, like a double drum test. Then, they will angle the ridges, followed by curb simulation. A tether for attaching the chairs also has been developed.
 - c. RPM is building with the South Dakota School of Mines and Technology team. They will test the track with one chair and 1 dummy first, with a goal to have 4 identical chairs being tested. A minimum of a month's time is needed for the same. The equipment, currently in South



Dakota, will be painted and shipped to FWM, which has a warehouse next to its office where the equipment will be located.

- d. There may be a concern with the belt dipping downward after the wheelchair hits the obstacle. Don mentioned there is enough tension in the belt to disallow the dip.
 - e. The test equipment may be louder like other testing equipment.
 - f. Caster test versus Belt tester: A good caster on a poor wheelchair may fail on the belt tester – Don.
4. Other updates:
- a. Pitt is testing chairs from MIT-CITE and LDS with ISO 7176.
 - b. ISWP staff and interns are documenting testing equipment for caster testing, curb drop, double drum and dummy. The documents will include 3-D designs, dimensions so machine shops can fabricate and instructions for use. ISWP will work with University of Pittsburgh to disseminate under a creative common license.
 - c. Jon reported organizations in Colombia, Mexico and Canada have expressed interest in creating wheelchair test labs, which will lead to more training and educational materials.
 - d. ISWP's current grant cycle ends on June 30, 2017. We submitted a no-cost extension request to August 31, 2017 and are in discussions with USAID for bridge funding with a goal to raise funds to proceed with implementing the strategic plan.



Subgroups (for reference)

- Design Guidelines: Mark Sullivan (lead), Daniel Martin, Jon Pearlman, Norman Reese, Chris Rushman, Eric Wunderlich
- Casters: Anand Mhatre (lead), Matt McCambridge, Jon Pearlman, Norman Reese, Don Schoendorfer, Joseph Ott, Stephanie Lachell
- Corrosion: Matt McCambridge, Don Schoendorfer, Anand Mhatre, Jon Pearlman
- Rolling Resistance: Norman Reese (lead), Matt McCambridge, Jon Pearlman
- Whole Chair Testing: Don Schoendorfer, Matt McCambridge, Josiah Auer, Mark Sullivan, Daniel Martin, Jon Pearlman, Norman Reese, Anand Mhatre, Dave Mahilo, Joseph Ott

Participants

- ✓ Daniel Martin, Shonaquip
Matt McCambridge, MIT
Norman Reese, LeTourneau University
Rachel, LeTourneau University
- ✓ 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
Ben Gebrosky, University of Pittsburgh
Scott Walters, Mobility Worldwide
Josiah Auer, Free Wheelchair Mission
Joseph Ott, University of Pittsburgh
Stephanie Lachell, University of Pittsburgh
Krithika Kandavel, ISWP

Prepared by: Anand Mhatre, University of Pittsburgh