**100th TRB Annual Meeting**

**Surrogate Measures of Safety Subcommittee ACS20(3)**

[**https://sites.google.com/site/surrogatesafety/**](https://sites.google.com/site/surrogatesafety/)

**Wednesday, January 13th, 2021, 10:00 AM - 11:30 PM**

**Virtual Meeting**

**Chair: Nicolas Saunier**

**Prepared by Étienne Beauchamp, revised by Nicolas Saunier**

1. Opening remarks

Nicolas Saunier (NS) welcomed the participants. Nicolas Saunier mentioned the change of the acronym. Participants can register on the [attendance sheet](https://odot.formstack.com/forms/trb_acs20_sign_in2021_sm) and subcommittee mailing list on its [website](https://sites.google.com/site/surrogatesafety/mailing-list-sign-up?).

1. Introduction of participants (breakout rooms)

The participants were randomly assigned to breakout rooms for 5 min for introduction.

1. Discussion and approval of the 2020 meeting minutes

There were no comments. The minutes are unanimously. approved.

1. Updates from liaisons with other TRB groups and International Associations
   * Performance Effects of Geometric Design (AKD10)

Gary Davis mentioned in the chat there was not much discussion about SMoS at the main committee meeting regarding AKD10. He will have a presentation on surrogate estimation of a geometric-related CMF at the AKD10 poster session on January 29th.

* + Subcommittee on Safety Analytical Methods (ACS20(1))

Xiao Qin presented the subcommittee, which had its meeting on the previous Friday. A website will be created for the subcommittee.

* + Other TRB Committees?

NS asked about other TRB committees that the surrogate measures of safety (SMoS) subcommittee should link with. Chris Schwartz mentioned the [Safety Assurance Metrics WG under ACP30](https://sites.google.com/site/trbvehiclehighwayautomation/news-and-events). Nick Foster mentioned in the chat that surrogate measures are of interest to the Bicycle Transportation Committee (ACH20) and the joint subcommittee - Pedestrian and Bicycle Safety Analysis. Improving the use of SMoS for bicycle safety is one of the top research needs right now and ACH20 would be happy to collaborate on related RNS or other projects. Christopher Melson mentioned in the chat the interest of ACP80(1) - Joint Simulation Subcommittee (SimSub) (presentation later).

* + International Co-operation on Theories and Concepts in Traffic Safety (ICTCT) - Aliaksei Laureshyn

Aliaksei Laureshyn provided an update on ICTCT. ICTCT has a long history, starting with a focus on traffic conflict techniques. It now has a larger scope, but still has SMoS at its core. The 2020 ICTCT workshops were postponed to 2021.

* + SAE committee on Surrogate Measures of Safety - Aliaksei Laureshyn

Aliaksei Laureshyn mentioned that unfortunately nothing happened in the past year. Researchers are not ready to make recommendations. People interested in volunteering can contact him and NS.

1. Surrogate measures at the 100th TRB Annual Meeting

NS presented a quick summary of SMoS papers and activities for this year’s meeting. 23 papers were submitted to ACS and identified with a primary interest in SMoS. There are about 11 papers presented in the main poster session 1202 Safety Performance and Analysis, Act 2: Surrogates, Conflicts, and Other Safety Data. There are 7 poster sessions with at least one paper relevant to SMoS, applied to buses and pedestrians, as well as with a focus on information technology.

Brenda Lantz mentioned in the chat that at one of the subcommittees of the Truck & Bus Safety Committee (ACS60), there was a presentation on [Correlating Hard-Braking Activity with Crash Occurrences](https://link.springer.com/article/10.1007/s42421-020-00024-x).

1. Research updates and presentations
   * Indiana research on traffic conflicts, Andrew Tarko

Andrew Tarko provided an update on the TScan project using LiDAR to detect and track users. A prototype was built and tested, then a second prototype (integrating two LiDAR units was built and deployed, along with manuals. The system tends to report false alarms when speeds are low. The remaining objectives are to collect data for several days and expand the counts to estimate the number of crashes and injury crashes, as well as crash costs.

Several questions were asked and answered in the chat (in the interest of time).

* + Traffic Simulation for Surrogate Measures of Safety: Collaboration with SimSub, Christopher Melson

Christopher Melson presented the new standing committee on Traffic Simulation (ACP80) and the Simulation Subcommittee (SimSub) (ACP80(1)) that has existed for several years. SimSub wishes to coordinate with user groups to ensure that all simulation users are represented. Christopher left his contact info ([cmelson1@lsu.edu](mailto:cmelson1@lsu.edu)) for questions or subscribing to the SimSub mailing list.

NS mentioned the long history of interest in traffic simulation for safety, in particular to simulate traffic conflicts.

* + Update on network wide safety assessment in the City of Bellevue, Franz Loewenherz

Franz Loewenherz gave a quick overview of the collaboration between the City of Bellevue and Transoft Solutions. Various metrics and computer vision techniques are used to evaluate safety and produce reports. He left links to [City of Bellevue technical reports](https://bellevuewa.gov/city-government/departments/transportation/safety-and-maintenance/traffic-safety/vision-zero/video-analytics) and [ITE Vision Zero Design Sandbox Competition](https://www.ite.org/membership/sandboxcompetition/).

* + [NCHRP 17-86: Estimating Effectiveness of Safety Treatments in the Absence of Crash Data](https://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4372), Bhagwant Persaud

Bhagwant Persaud provided the link to the NCHRP project and asked participants to share existing safety studies and datasets that can be used to estimate crash modification factors (CMF).

1. Brainstorming in breakout groups
   * New research directions, research needs statements and session/workshop ideas
   * Website, wiki, surveys and dissemination activities

Participants were split in three groups to discuss:

1. New research directions, research need statements
2. Webinars, workshops, and calls for papers
3. Outreach and dissemination; New directions for subcommittee

The [Slides](https://docs.google.com/presentation/d/1amFYwyjB7vtgXp0SvndKsJ1kyxkyalFWoTMGwj623hw/edit?usp=sharing) were used to capture ideas. The main ideas are:

* need for validation studies, to validate whether SMoS can predict (severe/injury) crashes;
* automated vehicles can provide data for SMoS (is it available to researchers?) and rely on safety indicators for their operation;
* research into alternate validation methods;
* need for standards, guides and tools for practitioners;
* propose a webinar on [NCHRP 17-86](https://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4372);
* request the USDOT (and others) to allocate funds through safety data initiatives to advance the state of practice;
* there is a new SAE Automated Vehicle Safety Consortium (AVSC), that could be connected with the SAE committee on SMoS;
* there are several companies offering services to diagnose safety using SMoS: how are they done and how do they compare?
* there are other committees to liaise with, eg interested in different user types (pedestrians, cyclists).

1. Coming conferences, meetings, research opportunities and other matters - all
   * 6th [International Symposium on Highway Geometric Design](https://ishgd2020.org/), Amsterdam, The Netherlands, 23-26 June 2021 (rescheduled), featuring the [Urban Streets Symposium](https://www.urbanstreet.info/6th-urban-street-symposium/) (or June 2022?)
   * [ICTCT](https://www.ictct.net/) extra workshop in Accra, Ghana, rescheduled to 2021, and regular workshop in Berlin, Germany, 28-29 October 2021
   * [8th Road Safety and Simulation Conference](https://www.nrso.ntua.gr/rss2021/), Athens, Greece, 22-24 September 2021
   * [ITE Vision Zero Sandbox Competition 2021](https://www.ite.org/membership/sandboxcompetition/)
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