workshop

Surrogate Safety Measures

16th October 2017, 13:00-16:00
Spiegelzaal, hotel Kurhaus
How do we know this is unsafe?

Well, let’s wait for some planes to crash!!!….
Program

Welcome
Aliaksei Laureshyn, Lund University (Sweden)
Andrew Tarko, Purdue University (USA)
Matin Nabavi Niaki, Polytechnique Montreal (Canada)

Break
Tarek Sayed, University of British Columbia (Canada)
Kay Gimm, Andreas Leich, DLR (Germany)
Aliaksei Laureshyn, Lund University (Sweden)

Panel discussion
Interactive session
State-of-affairs in surrogate safety analysis

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Publications about SSM
Conflict techniques

![Bar chart showing the number of publications for different traffic conflict techniques. The chart compares publications before 2005 (blue) and between 2005 and 2015 (yellow). The categories include US, Swedish, British, DOCTOR, Canadian, and Other. The chart indicates a higher number of publications before 2005 for the US and Swedish techniques.](chart.png)
Individual indicators

![Bar chart showing the number of publications for different indicators over two time periods: Before 2005 and 2005-2015. The indicators are TTC, PET, Deceleration, and Other.](image)
Time-to-Collision (TTC)
Post-Encroachment Time (PET)
Deceleration-based

None?
Study design

![Bar chart showing the number of publications and average observation duration by time period (Before 2005 and 2005-2015). The chart is color-coded with blue for Before 2005 and yellow for 2005-2015, with bars indicating the number of publications and duration ranges from 1 to 96+ hours.]
## Validity

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Denmark (50 sites)</td>
<td>4</td>
<td>2</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Sweden (50 sites)</td>
<td>36</td>
<td>37</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Belgium (51 site)</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Spain (27 sites)</td>
<td>28</td>
<td>3</td>
<td>-</td>
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</tbody>
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Validity

- Absolute
- Relative
- Process
“Safety continuum”

- Light conflict
- Moderate conflict
- Serious conflict
- Light collision
- Serious collision
Is human-based validation still “valid”?

Automation
Automation

- Is human-based validation still “valid”?
Collision risk vs. outcome
VRUs???

- Other “evasive manouvres”
- More severe consequences
- “Who hits whom” makes difference
- >60% severe injuries – single falls!!!
InDeV-project

- 24 sites -> 3 weeks (7 countries)
- 3 sites -> 1 year
- Focus on VRUs
- Semi-automated tools

www.indev-project.eu
Thank you very much for your attention!