Introduction
The measurement of activity and participation is a key area of research activity among people with disabilities [1]. This case study compares the differences between a self-report instrument and a GPS/PRI (Prompted Recall Interview) as a measure of activity and community participation in two subjects who use wheeled mobility devices.

Methods
Research conducted at Georgia Tech between 2004 and 2006 examined the impact of power wheelchair use on activity and participation and health [2,3]. Subjects’ wheelchairs were instrumented with a data logger and GPS unit for a two-week period.

PRI (Prompted Recall Interview)
- asks subjects about the activity purpose at recorded destinations, mode of travel, and travel companions.
- administered within 2 weeks after de-instrumentation.

CPPRS (Community Participation and Perceived Receptivity Survey)
- self-report participation measure for people with mobility disabilities.
- asks subjects about common monthly and yearly destinations.
- asks subjects about destinations they want to visit but cannot
- administered within 48 to 72 hours after chairs were de-instrumented.

For each destination CPPRS asks:
- Frequency of visits
- Mobility device used
- Overall accessibility
- Social attitudes
- Choice
- Environmental barriers and facilitators

Results

<table>
<thead>
<tr>
<th>Subject A</th>
<th>Subject B</th>
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</thead>
<tbody>
<tr>
<td>57 yo African-American man with quadriplegia</td>
<td>42 yo African-American man with quadriplegia</td>
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<tr>
<td>Uses a power tilt-in-space wheelchair (~4.5 years)</td>
<td>Uses a power tilt-in-space wheelchair (~3 yrs)</td>
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<td>Lives in a multi-level, single family home with his wife and adult son; home is fully accessible</td>
<td>Lives alone in an accessible apartment</td>
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<td>Neighborhood has sidewalks; stores &amp; services are driving distance away</td>
<td>Neighborhood has sidewalks and some stores within wheeling distance</td>
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<tr>
<td>Uses adapted van driven by wife or friend</td>
<td>Relies on Paratransit for travel outside of his immediate neighborhood</td>
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</tbody>
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Differences between CPPRS & PRI

Subject A
- More trips to Shepherd Center from PRI indicates CPPRS category “doctors offices” does not capture full range of health services.
- PRI queried only recorded destinations, CPPRS also captured activities important to subject, but which subject could not participate (e.g., visiting family/friends).
- PRI captured destinations missed by CPPRS, e.g., subject denied going to gas stations and restaurants in the CPPRS but PRI showed that he visited both places.
- “Volunteer” and “Work” categories may be ambiguous. PRI captured subjects volunteering activities. Subject denied volunteer activities in CPPRS.

Subject B
- “No destination” trips are not destination-specific, e.g., wheeling about for fun, chatting with people in the community, sitting in the sun. No equivalent CPPRS category, however, “public parks” may have captured their recreational and social nature in terms of destination.

Conclusion
GPS/PRI methods allow researchers to accurately document activities based on objective data. They provide insight into activities, participation, wheelchair use, and travel patterns which, in turn, help inform and refine self-report measures.

References

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