

Exceptional service in the national interest



HCI Testing in Laboratory and Field Settings

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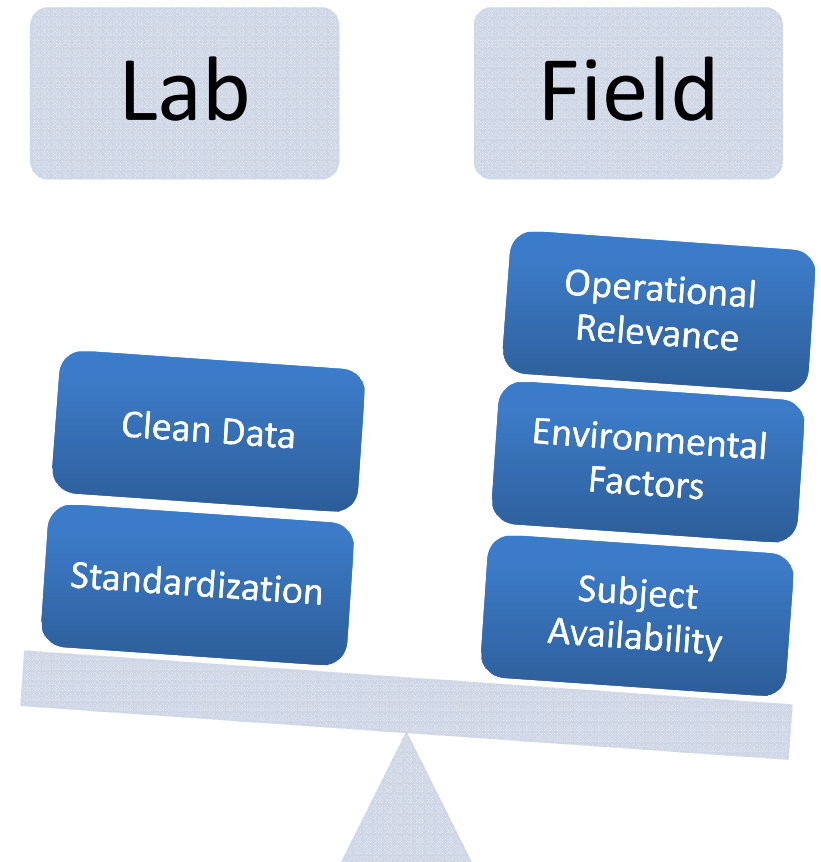
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Introduction

- Operational Relevance
- Experimental Design
- Disruptive Technologies
- Large Datasets
- Managing Teams

Operational Relevance

- Balancing realism and fidelity
 - What are you willing to trade?
 - Can tasks be computerized or simulated?
 - Is there something unique about the environment?



Experimental Design

Assess the main objective of your study.

- If key is to obtain feedback on an interface, a study in the field may not be necessary.
- If it is to measure eye tracking while performing a task in an operational environment, you may want to do it in the field.

Only add what you need.

- If your main task requires your subject to move around a lot, you may not want to just tack on EEG or eye tracking just because.

Disruptive Tech

- New Technologies are exciting...
 - BUT, new equipment needs to be tested in a controlled environment before going into the field.
 - If they don't perform well in the lab, you can only expect things to be more noisy in the field.
 - It is not just the tech – You must also test out the data analysis methods you will use.

Larger Datasets

- With doing research in the field, there may be more noise introduced.
 - More trials
 - More subjects
 - More data analysis
 - More time to complete

Managing the Team

- Problems always arise in the field!
- Person collecting the data is not only knowledgeable in the data collection process, software, and objectives.
 - Must be aware of the technical aspects of the equipment in case something needs to be modified in the software or hardware.
- Can create a research team where there are masters of the two domains: Lab and Field
 - Master/Apprentice Model

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