

## Exploratory research to inform design & innovation

A Panel with:

- **Marvin Dainoff**, Miami University, outgoing Pres. HFES
- **Kevin Simons**, LexisNexis (Reed Elsevier)
- **Kathi Kaiser**, Centralis (Chicago)
- **Gary Klein**, Chief Scientist, Klein Associates

Moderator: **Peter Jones**, Redesign Research



World Usability Day 2006

14 November 2006 • Making life easy!

# Selecting Exploratory Research Methods: 3 Case Studies

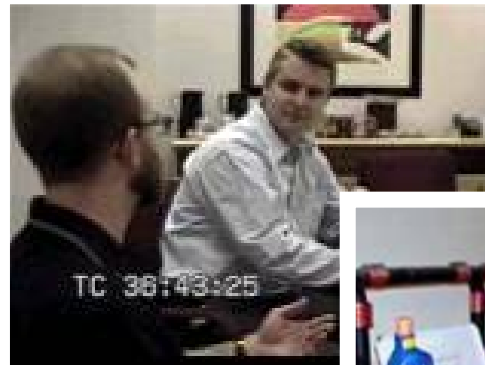
**Kathi Kaiser**  
**Centralis**

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**World Usability Day 2006**  
**Dayton, Ohio**

## Our Point of View

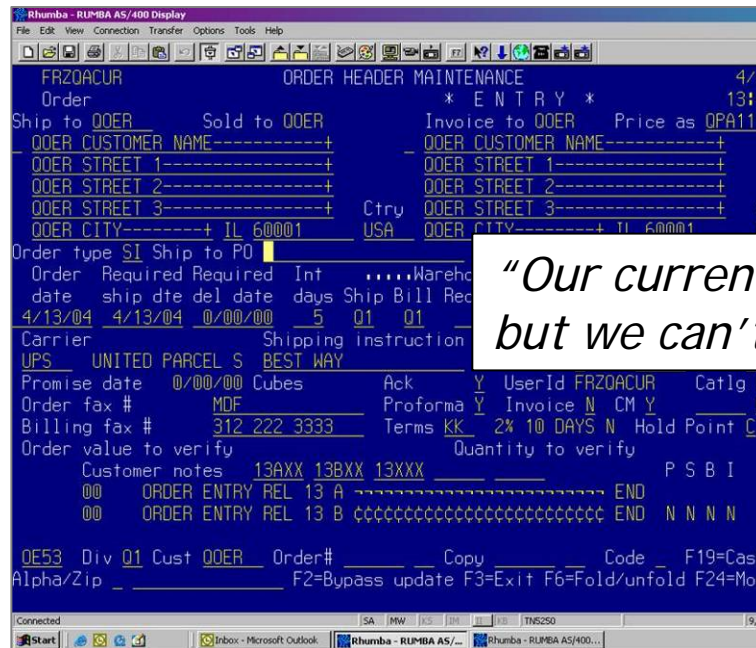
Assumption: Innovation comes from a rich understanding of user needs, attitudes, behaviors, environments...



**Issue:** What's the best way to gain that understanding?

## Case Study 1: The Design Challenge

- Convert an order entry application from AS400 to HTML
- Increase the appeal of the application among new users, while meeting the needs of current loyal customers



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FRZOACUR          ORDER HEADER MAINTENANCE          4/1
Order             * E N T R Y *                    13:14
Ship to OOER      Sold to OOER                    Invoice to OOER  Price as OPA11
OOER CUSTOMER NAME-----+  OOER CUSTOMER NAME-----+
OOER STREET 1-----+      OOER STREET 1-----+
OOER STREET 2-----+      OOER STREET 2-----+
OOER STREET 3-----+      Ctry OOER STREET 3-----+ C
OOER CITY-----+ IL 60001  USA OOER CITY-----+ IL 60001
Order type SI Ship to PO
Order Required Required Int .....Wareh
date ship dte del date days Ship Bill Rec
4/13/04 4/13/04 0/00/00 5 Q1 Q1
Carrier Shipping instruction
UPS UNITED PARCEL S BEST WAY
Promise date 0/00/00 Cubes Ack Y UserId FRZOACUR Catlg P
Order fax # MDF Proforma Y Invoice N CM Y
Billing fax # 312 222 3333 Terms KK 2% 10 DAYS N Hold Point C
Order value to verify Quantity to verify
Customer notes 13AXX 13BXX 13XXX P S B I
00 ORDER ENTRY REL 13 A ~~~~~ END
00 ORDER ENTRY REL 13 B ~~~~~ END N N N N
QE53 Div Q1 Cust OOER Order# Copy Code F19=Cash
Alpha/Zip F2=Bypass update F3=Exit F6=Fold/unfold F24=Mor
```

*"Our current users love it...  
but we can't sell it"*

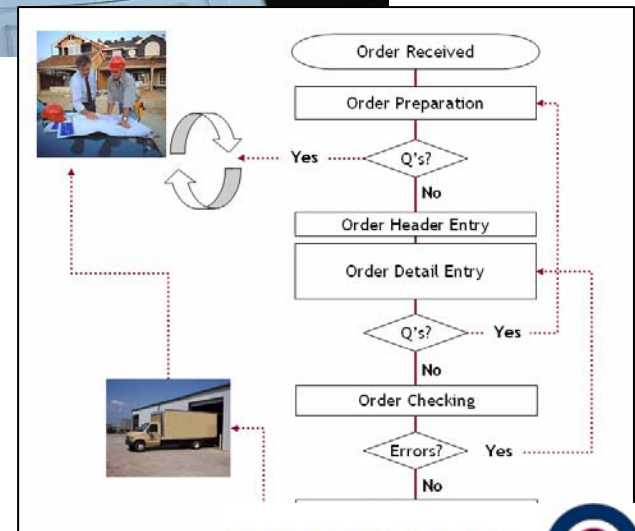
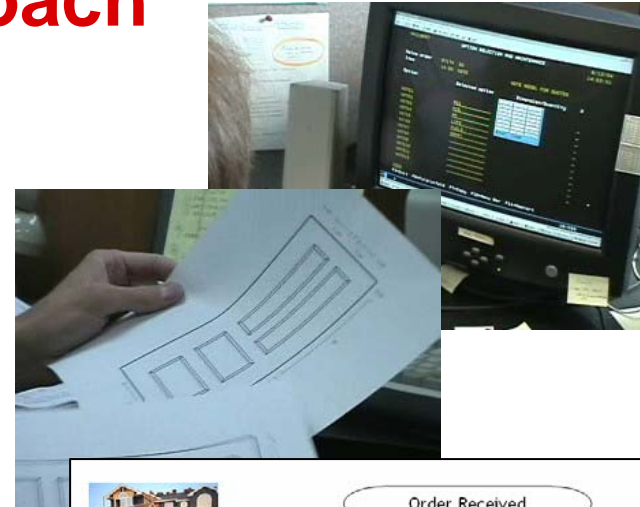
## Case Study 1: Considerations

- Participants were available and enthusiastic
- Order entry is generally a short, observable process

## Case Study 1: Chosen Approach

### Contextual Inquiry:

- 8 visits to work sites across 4 vertical markets
- Direct observation, apprentice-style
- Analysis of related “artifacts”



## Case Study 2: The Design Challenge

- Develop innovative products to support the work of fraud investigators



## Case Study 2: Considerations

- Participants were not readily available, and could not accept incentives
- The fraud investigation process is not fully “observable”; it occurs across various locations, over time

## Case Study 2: Chosen Approach

### Total Immersion:

- We attended fraud investigation training to become peers of the users
- Relationships forged during training unlocked later on-site interviews

Courses by Description

#### Financial Crimes Courses

##### **Financial Crimes Against Seniors (FCAS)**

This 3-day training in Financial Crimes Against Seniors involves this rapidly increasing victim group, a multi-agency approach to these crimes and we encourage you to attend the class.

##### **Financial Investigations Practical Skills (FIPS)**

Provides hands-on training designed specifically to address economic crime.

##### **Financial Records Examination and Analysis (FREAN)**

Develops skills in using computers to examine and analyze data, in written reports, graphical depictions, and in court testimony.



## Case Study 3: The Design Challenge

- Adapt an existing product to address user needs in a new category



Old Product: Small Engine



New Product: Camping Generator



LexisNexis™

## Case Study 3: Considerations

- A prototype of the product exists
- Timing and budget made direct field observation impractical

## Case Study 3: Chosen Approach

### Usability Testing:

- 8 lab-based sessions in a single day
- The prototype served as a stimulus for a broader discussion of user needs





## Research Methods to Fuel Innovation

- Consider **Contextual Inquiry** when:
  - ...participants are available, willing and able
  - ...the task is easily observable

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- Consider **Total Immersion** when:
  - ...participants are hard to access
  - ...background knowledge is required to understand the task
  - ...the task is not easily observable

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- Consider **Usability Testing** when:
  - ...a prototype of a new idea exists or can be easily built
  - ...the user's environment is not easily accessible

**Now for your questions!**



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## Get involved, meet up!

### Join national & local professional societies

- **HFES** : Tri-State & Southern Ohio Chapters
- **UPA** : International
- **Info Architecture Institute** : International
- **UX Network** : Global, *and local* (See me if interested)

