The Experience is the Thing: Having User Experience Drive Testing

PNSQC
Tuesday, October 9, 2012
User Experience Design

Visual Design
Information Architecture
Interaction Design
Accessibility
Human–Computer Interaction

© 2012, Peter G Walen
User Experience

ISO 9241–210
Ergonomics of Human System Interaction

User Experience:
A person's perceptions and responses that result from the use or anticipated use of a product, system or service.
Usability

User Friendly

Useable

“The ease of use and learnability of a human-made object.”
We have all read a bunch of stuff on this and seen and heard a bunch of speakers talk about how important this is.
This presentation is NOT one of those.
All of those ideas are important.

None of those ideas matter if the people using the software can’t do what they need to do in a reasonable fashion.
Once Upon a Time...

A New System was being developed...

Distribution Center Management
Transportation/Delivery
Retail Item
Wholesale Item
Retail Pricing
Order Processing
Accounts Receivable
Accounts Payable
Once Upon a Time...

*New System* developed to replace an “archaic” mainframe–based legacy system.

Loads of cool features implemented to help people do their jobs:

Auto–complete on Key–fields;
*Windows/IE like Function Keys;
Screen Flow followed Printed Data Entry forms;
Once Upon a Time…

Users *LOVED* the new screens!

Very readable

Hover-over features

Way–easy to use compared to the mainframe system
Once Upon a Time…

Everyone loved it

*Almost* everyone loved it, except…

*The people entering new items*
Once Upon a Time…

The data entry forms were used because “the users” were already familiar with them.

All the important fields were well known; Thousands of copies were in circulation; Customers & Data Entry staff were equally familiar with forms and data;
Once Upon a Time...

Follow the key-entry sheet...
Finish Page 1 and move to Page 2
Error message pops up:

*Cannot save record: Required field not populated*
Once Upon a Time...

Except the field is not on Page 1

Dialogue box pops-up to allow users to enter missing data

And processing continues… until they press enter
Once Upon a Time...

When an error message pops up:

*Cannot save record: Required field not populated*

This message appears 5 times.
Once Upon a Time…

How could this be?

The screens were developed from the data entry forms!
Once Upon a Time…

How could this be?

The data entry forms were developed for use by the mainframe system being replaced.
No one looked into how:
the data entry form was arranged
the schema was defined
the old system worked
(and why)
What Happened?

The Retail Item System was carefully tested.

The testers reported something “odd” and were told by the developers that it was what the design called for.

They asked if the user reps approved the design.
What Happened?

The user reps were all from departments using the screens, and not people who entered new items.

They had no idea how other groups interacted with the system.
What Happened?

Pages were formatted
Without considering which fields were required
Visual appeal trumped function

© 2012, Peter G Walen
What Happened?

Moving from one page to the next included attempting to save the record being entered to the database...

…which did not handle nulls for five fields not on the first page.
Lessons

No two “Users” have the same experience or interaction with a piece of software.
Sometimes the same person at two different times of the day has totally different interactions with the same software.
Lessons

The best intentions around UX do not matter if the result is a system that *impedes* work instead of *supports* it.
Lessons

Systematic Bias:
Tendency of a process to favor particular outcomes: WAD Syndrome

If the people defining the rules are not the stakeholders of the business function, why are they defining the rules?
What Happened?

The behavior was noted by developers and testers. Development leadership wrote off the reports as Works as Designed.

Testers noted the behavior and failed to successfully advocate for the behavior to be addressed.
One **MAJOR** idea was missed:

The “system” was not truly stand-alone!

The focus was on Retail Item System

*Other* systems did not get the same detailed attention
People using software don’t see “the system” the same way most software people do.

People using software for different purposes will behave differently from each other.
System of Systems

Their *Stories* are *Intertwined* but different.
How Designers Viewed the System

Retail Item
Small things make a difference

How many times does a person need to sign on to the same system?
Small things make a difference

Is it reasonable to expect users to enter data already stored (and accessible) in the system?
Recently...

New system upgrade to support sales modeling.
Recently...

Sales–person self–reports their sales activity.

Mentor reviews it with them and examines “opportunities for growth.”
And so...

Sales–person signs on…
(to the system front end)

Sales–person signs on *again*…
(to the modeling tool)

Mentor Signs on…
(to the modeling tool)

Except – to get to the Modeling Tool

*Sales–person MUST be signed in to the system front end*
And so...

Sales person enters their “real” sales data for given period...

That may (or may not) match the system’s records.
And so...

Test Reviewer asks why this is.

Answer?

Its designed that way.
What was going on?

To the users and the testers, it looked like one system.

Actually, they were being redirected to an independent modeling system.

Was this clear to anyone other than designers?
Lessons

- Communicate
- Communicate
- Communicate
- Ask Questions to help everyone understand
Contact Information

I can be reached here:

Twitter: @PeteWalen
Skype: Peter.Walen
Rhythmoftesting@blogspot.com

© 2012, Peter G Walen