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Free Usability Data

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ABSTRACT Convergent software industry thrusts of user-centered design, cost-justifying usability, and discount usability engineering drive usability engineers toward gathering the least expensive user data possible. What could be better than free data? This short paper encourages usability engineers to capture user data that already exist in their organizations, and points them to likely sources of these data.

KEYWORDS usability, discount usability, user data, user-centered design

1. FOUR ASSERTIONS

- Human beings are remarkably similar.
- Computer programmers are human.
- Human beings are remarkably different.
- Product development resources are finite.

These conspire to make usability key in software development. Human beings are seductively similar – most have two functioning eyes and arms, fingers roughly the same size, memory ranging only from fair to "I wish it was better." Too, programmers are human, and understandably tend to think if they can use a computer program, other humans likely can too.

These superficial similarities mask vital differences in cognitive capabilities and experiences. Thus we differ wildly in what we find "usable." This, and the programmers' tendency to depend on their own intuitions, has led to a long, inglorious history of unusable user interfaces (UIs). The solution is a strong focus on "user-centered design" (Norman, 1990), whereby user data inform product designs.

Plus, product development resources being finite, "discount usability methods" (Nielsen, 1993) for collecting these user data have emerged as a key approach to user-centered design.

2. DISCOUNT USABILITY

Discount usability engineering methods, such as usability walkthroughs, can be employed by usability professionals (and sometimes the software developers themselves) at low cost, and yet yield ample, high quality usability data to help steer product re-designs.

3. WHY IS USABILITY A PROBLEM?

There are various reasons why software UIs are not wondrously usable. An organizational inhibitor to good UI design is "the limitation of contact between

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designers/developers and users" (Mayhew & Bias, 1994, p. 296). Whether for reasons of corporate propriety, or expense, or a fear of allowing customers to meet with "bit heads," software developers have tended not to communicate directly with users.

4. A SOLUTION: "DEVELOOPS"

One rich yet nearly free solution is to establish feedback loops between product development and other organizational groups (thus, "develoops"), to capture user data that are in-house already, the least expensive data imaginable. At BMC Software, these feedback loops met with unanimous support, but they required a tailored, one-group-at-a-time approach.

4.1. Customer Support

Customer support is a rich source of quantitative and qualitative user data. Often in a company there's a structured feedback loop between customer support and R&D; indeed, customer support may be the primary source of new product features. At BMC there are regular meetings between support and R&D.

4.2. Sales and Pre-sales Support

Any sales force is busy enough without forming new communications links. But sales has much direct customer contact, especially with first-time users, so are likely to have unique wisdom about a product. At BMC, the corporate intranet site is used for the R&D-sales loop. The pre-sales folks maintain, and share with R&D, a LotusNotes database for each product.

4.3. Training

It is easy to imagine a course instructor thinking, "I hate this part of the class, it's so hard for me to explain." **THAT** part of the product needs to be communicated back to R&D. At BMC, the intranet site is used for this feedback loop.

4.4. Services

Consultants who serve customers in various roles – set-up, trouble-shooting, tailored configurations – represent another source of user data. The intranet site, again, is the feedback vehicle used at BMC.

4.5. Caution Zones

First, a loop is a loop, implying information flow in both directions. R&D must track reported usability problems, and alert the initiator when a fix is implemented. Further, other groups benefit from early notice about optimal current product work flows.

Second, you may hear that someone had fed back information to R&D, but was not convinced that it did any good. Problem tracking is an imperative.

Third, drive feedback loops from all directions. Individual product developers should be convinced about the value of user data to the success of their designs. Other groups need to recognize the value of their efforts to the usability (and therefore customer satisfaction and therefore sales) of the company's products. Further, each group (and manager) may need help appreciating how ancillary benefits address their central charter, benefits such as fewer calls to customer support and additional marketing help.

Fourth, what's GOOD about these products? Encourage all of the people in your organization to communicate particularly usable and well-liked areas of your products. This affords R&D positive reinforcement for their good work. Further, it identifies areas that require **no** further usability attention, and should be left alone (and, indeed, used as models for further extensions).

6. REFERENCES

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