ISO 13407 is dead. Long live ISO 9241-210!

An important usability standard has been updated for the user experience era. The standard describes 6 key principles of human centred design and serves as a manifesto for the field of user experience. — DAVID TRAVIS, JUNE 6, 2011

Why you shouldn't click the Back button

If you're the kind of person who equates 'standards' with 'boring', I can appreciate that you were sorely tempted to hit the back button after reading the title of this article. (What? You never even got that far? Come back!)

The reason you should read on is that this article isn't about just any standard. **It's about the single most important standard in user experience**.

'Ergonomics of human-system interaction, Part 210: Human-centred design for interactive systems' is a process standard aimed at people responsible for managing design processes. It presents a high level overview of the activities that are recommended for human centred design.

But it's more than a boring old standard. It's also a manifesto for the field of user experience. And unlike many other manifestos you'll come across, this one has been determined by international consensus rather than by one or two self-appointed experts in the field.

Just as with the other meaning of that word, 'standard' — a flag to rally behind — we can use this standard as the rallying point for our discipline.

About ISO 9241-210

The standard used to be known as ISO 13407. But last year it was updated and re-issued as ISO 9241-210 to bring it into line with other ISO usability standards. (So if you hear anyone talking about ISO 13407, they are out of date. They should be talking about ISO 9241-210).

The standard describes 6 key principles that will ensure your design is user centred:

- The design is based upon an explicit understanding of users, tasks and environments.
- Users are involved throughout design and development.
- The design is driven and refined by user-centred evaluation.
- The process is iterative.
- The design addresses the whole user experience.
- The design team includes multidisciplinary skills and perspectives.

If we explore each of these principles, you'll see why I believe this standard serves as an ideal manifesto for the field of user experience.

The design is based upon an explicit understanding of users, tasks and environments

This principle is about understanding your users' 'context of use'. I like to think of the context of use as **the user experience trinity**: you need to understand your users, understand what they want to do with the system and understand the environment in which the system is used. As an example, the standard contrasts an interface aimed at a teenager downloading music on a mobile phone with a business user accessing corporate information on a handheld device. What makes a great experience for one may not be an acceptable experience for the other. Anyone who works in the field of user experience must surely sign up to this principle.

Users are involved throughout design and development

The purpose of this principle is to ensure design teams **involve users in all design phases**: not just by running a focus group at the start of design or by administering a survey at the end of design. Moreover, the standard emphasises that user involvement needs to be 'active': in other words, you don't simply demonstrate your design to users, you engage them in the design. You can achieve this through field studies early in design and usability testing once you have an artifact that people can use. Again, this principle is a shoo-in for anyone who works in the field of user experience.

The design is driven and refined by user-centred evaluation

If I was asked to name one important contribution that the field of user experience has made to the world of design, I'd immediately pick usability testing. As well as being the canonical method that almost defines the field, it truly helps design teams improve upon their products, software and services. But one mistake that's often made is to run just one test, usually at the end of development. The standard points out that usability testing should be carried out throughout the design process. So you should also use it to test preliminary designs, such as paper prototypes and electronic mock-ups.

The process is iterative

The standard describes this principle unambiguously: **'The most appropriate design for an interactive system cannot typically be achieved without iteration.'** The idea behind this principle is that it's extremely difficult, if not impossible, for users to explain what they want from a system. So to find out what people want, you have to show them something that they probably **don't** want (your first design) and then discover how to improve it. This means that if you're using a waterfall methodology where you have to nail down requirements before starting on design, your design process will struggle to be user centred. The standard doesn't proscribe any particular development methodology, but if you're using Agile then it's much more likely you'll be following this principle.

The design addresses the whole user experience

This principle wasn't mentioned in the standard's previous incarnation as ISO 13407. It's probably been included in this new version to make sure people realise that usability isn't just about the hygiene factor of making things easy (or at least, not making things difficult). 'Easy' is a good place to start, but **usability (and a good user experience) is about a lot more than making things simple**. The standard makes this explicit by writing, 'the concept of usability used in ISO 9241 is broader and... can include the kind of perceptual and emotional aspects typically associated with user experience.'

The design team includes multidisciplinary skills and perspectives

I've often worked with design teams where everyone seems to have been cast from the same mould. For example, the design team contains predominantly graphic designers, or predominantly programmers, or predominantly usability experts. With this principle, the standard is pointing out that **a siloed design team is the wrong way to approach user centred design**. You need to include a range of views, including the voices of accessibility experts, end users, domain experts, marketing, tech support, technical writers and business analysts, as well as the roles just mentioned.

Why this standard matters

Despite being in the midst of a recession, the user experience industry seems to be on an exponential growth curve. There is an incredible variety of roles, job titles and viewpoints. Indeed, this is what makes the field so exciting to work in. But one of the risks of rapid growth and diversity is dilution: as someone once said, if you don't stand for something, you fall for anything. What makes ISO 9241-210 so important is that it gives our field something to stand for: a manifesto to rally behind.

This is why the standard matters and why it should be on the reading list of everyone who works in user experience.

(You can buy ISO 9241-210 from ISO's web site. It costs 124 Swiss Francs.)

About the author

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Contextual inquiry: how to plan, execute and analyse a site visit

Oct 20, London: Learn how to get the most from a field visit to a customer location.

ISO 13 407 Model Overview

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                        │ 1. plan the human │
                        │ centered process  │
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                                  ▼
complete              ┌─────────────────┐
   ▲                  │ 2. specify the    │
   │         ┌───────▶│ context of use    │
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│ 5. evaluate   │                 ▼
│ designs against│       ┌─────────────────────┐
│ user requirements│     │ 3. specify user       │
└──────────────┘         │ and organisational    │
       ▲                 │ requirements          │
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       └─────│ 4. produce design│◀──────┘
             │ solutions         │
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1. plan the human centered process

2. specify the context of use

3. specify user and organisational requirements

4. produce design solutions

5. evaluate designs against user requirements

complete

ISO 9241-210

Plan the human-centred
design process

Designed solution
meets user requirements

Understand and specify
the context of use

Iterate,
where
appropriate

Evaluate the designs
against requirements

Specify the user
requirements

Produce design solutions
to meet user requirements