User-centered design and eyetrack evaluation of a generic product specification at IKEA

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A prototype was created and tested against more conservative ways of communicating product design specifications. This thesis aims to prove new and efficient ways to set standards for the designing and testing of software.

IKEA has had a problem with their subcontractors misunderstanding the specifications describing their products for a long time. As my master thesis project I have analyzed these specifications and made a first step towards making them more user-friendly. I did this by creating a user-friendly prototype. After creating the prototype it was thoroughly tested and showed great improvement in usability in comparison to IKEA's previous system. As this probably is an issue for other companies as well, future studies will hopefully show more user-friendly solutions to this issue. Many large companies have multiple subcontractors today and it is vital that these properly understand what they are asked to do. This could prove to highly increase efficiency in communication, which is invaluable for said companies. My prototype mainly aimed to prove the increased efficiency and only implemented a small portion of the specifications. Future work could incorporate every specification and address even more issues, if any are found. When other companies see the improvements IKEA have made they might want similar solutions, which might set a new standard. As a rather unique method, this project has utilized eyetracking devices as shown in Figure 1. These were used to further strengthen the claim of increased efficiency. This is far from the first time these devices have been used in this manner. However, if more studies would use this technique a whole new, and more efficient, standard for testing how user-friendly software is could be set. This could significantly change the way we design software today.

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Requirements for Plywood

Test Method: ASTM E 1333 or ASTM D 6007 (ppm) with limit: 0.05

Test Method 2 EN 712-2, Gas analysis (mg/mz/h) with limit: 0.05

Certification: Plywood shall be TPC-certified for CARB Phase 2 or be PS 1-certified

Alternate test method if product is produced and sold in North America: ASTM E 1333 (2002), i.e. large chamber test method with limit for Phase 1:0.05 ppm

Select documentation to view:

TPC-certificate

Approved exemption from TPC-certification (NAF, ULEF)

Statement of compliance with delivery

Lotter with General statement of complance for the board production

Marking of boards pallets/bundles

PS 1 Certification

Build-in products to be sold in Japan
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Figure 1: An heatmap showing the average fixations for all test persons while looking at this part of the prototype.