Background Document

LibreOffice
The Document Foundation

MUFFIN
LibreOffice User Interface Concept

LibreOffice's user interface (UI) concept was born with the first generation of Windows based office suites, in the early nineties. Although improved and updated, the concept was not changed until 2012, when the code refactoring effort introduced the SideBar (originally developed by IBM for Symphony and then released under an open source license).

The success of the SideBar, which was introduced as an optional feature, has increased the interest around the user interface, and increased the number of people volunteering to contribute.

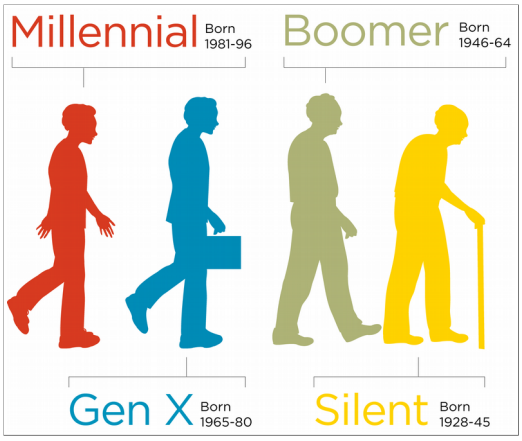
Improvements started to creep in for LibreOffice 4.4, with the reorganization of menus and toolbars. With the introduction of the LibreOffice 5.0 family, the UI become the main focus of the development cycle.

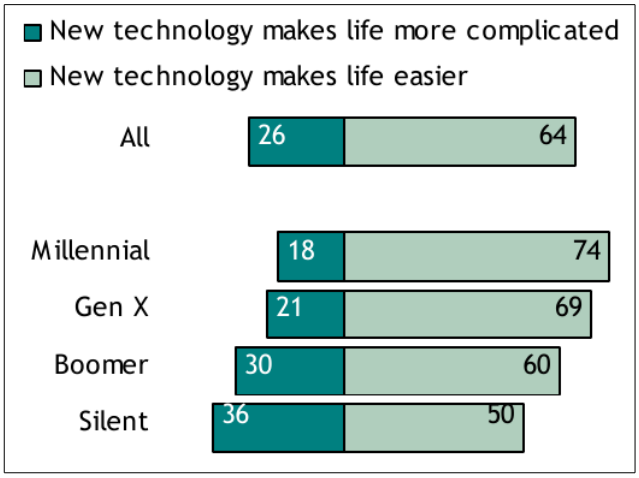
First of all, the Design Team has drafted guidelines for the new UI - "simple for beginners and powerful for experts" - based on four key principles: (1) Novices can start to work with LibreOffice without needing to read a manual, (2) In every situation the user is confronted with only a few options, but can get all options on demand, (3) Full access keeps usability first, but might need some training, and (4) Experts will have access to all functionality.

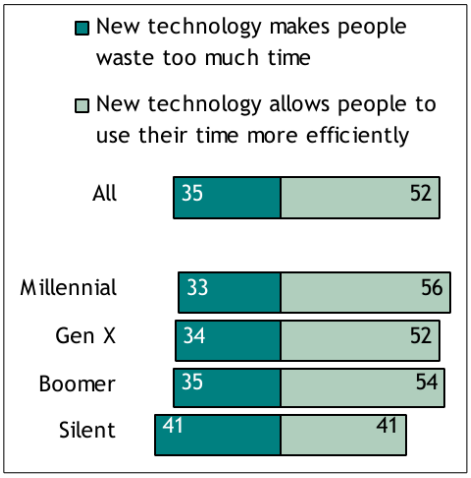
LibreOffice 5.0, 5.1 and 5.2 introduced several incremental changes to menus and toolbars, including the availability of a Single Toolbar mode for end users willing to reduce to the essential minimum the screen space "stolen" by the UI.

While working at the development of new UI features, the Design Team surveyed LibreOffice users to realize that the common denominator they were looking for has been obsoleted by the new reality of PC users.

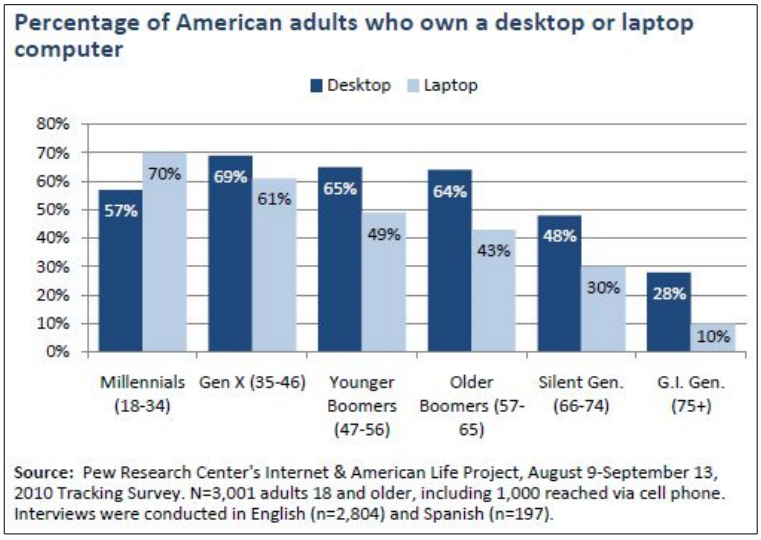
Today, PC users span over five generations: Silent (1928 to 1945), Boomers (1946 to 1964), Gen X (1965 to 1980), Millennials (1981 to 1996), and people in their 20s who have not yet been categorized by marketers. Each generation has a different relationship with technology, and this means that a single UI capable of satisfying all users cannot be developed.







The different attitude was confirmed by Pew Research Center in 2010, while trying to portray Millennials. Although focused on the US, percentages are probably common to most advanced countries [1].

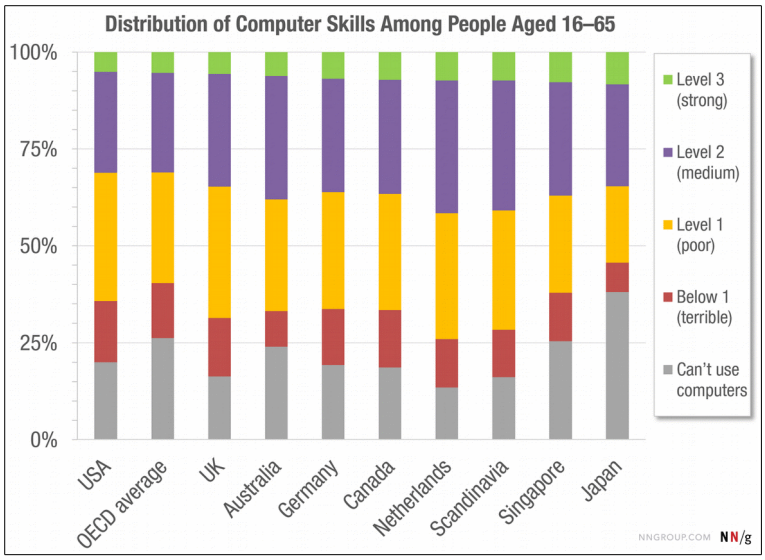


In fact, looking at the histogram on the left, the difference in attitude is higher than the difference of PCs owned by members of each generation.

Speaking of hardware platforms, desktops and laptops offer a variety of screen sizes which are difficult to leverage with a single UI. In fact, between an old 4:3 CRT and a new 16:9 LCD there is a huge difference in screen real estate: while the first user is happy with a vertically developed UI (so, bars on top, without sidebar), the second user prefers a horizontally developed UI (so, bars reduced to a minimum, plus sidebar).

Analysts do not release any market research on PC screens, but looking at data collected by websites it is fairly easy to realize that there are far more screen sizes than you could believe.

The same applies to computer skills. According to the OECD, users can be divided into five skill categories: (1) Can't Use Computers, (2) Below Level 1: use



of only one function to meet one explicit criterion, (3) Level 1: use of widely available and familiar technology applications, (4) Level 2: use of generic and/or more specific technology applications, and (5) Level 3: fluent use of generic and/or more specific technology applications [2].

According to data collected between 2011 and 2015 from a sample of 215,942 individuals in 33 countries and published in 2016 by the OECD, computer skills are far worse than expected in most countries. The high percentage of people without computer skills (Can't Use Computers) is due to the fact that quite many people refused to go through the test, which was simulating several computer tasks quite frequent in a business environment.

Based on the survey of LibreOffice users, and the data provided by third parties (and summarized in this background), the Design Team decided to enhance the UI by adding another option - the Notebook Bar - to create a flexible UI capable of adapting to different user needs.

The MUFFIN (My User Friendly & Flexible INterface) represents a new approach to UI design, based on the respect of user needs rather than on the imposition of a single UI to all users, independently from their generation, PC hardware, and computer skills.

[1] Pew Research Center, Millennials: Confident. Connected. Open to Change, February 2010, http://www.pewsocialtrends.org/2010/02/24/millennials-confident-connected-open-to-change/.

[2] The Distribution of Users' Computer Skills: Worse Than You Think, by Jakob Nielsen, November 2016, https://www.nngroup.com/articles/computer-skill-levels/, based on data from OECD, The Survey of Adult Skills, June 2016, http://www.oecd-ilibrary.org/education/the-survey-of-adult-skills_9789264258075-en.