

TAKING THE MOBILE INTERFACE EXPERIENCE TO A NEW DIMENSION

By Valve

Designing graphical user interfaces (GUI) targeted at mobile devices is a challenging task. The available screen real estate is limited and the sparse space available may not have the same size or dimensions on target devices. Ideally, however, any UI elements should appear at optimal size and form on every screen. The advent of vector technology on mobile devices allows for the creation of memorable and pleasing user experiences.

Vectors have arrived on the mobile

Vector graphics have long made their arrival on the user interfaces of personal computers where modern operating systems make intensive use of vector graphics to create smooth and scalable screen views. In addition to desktop icons and window managers, many of the smooth effects when

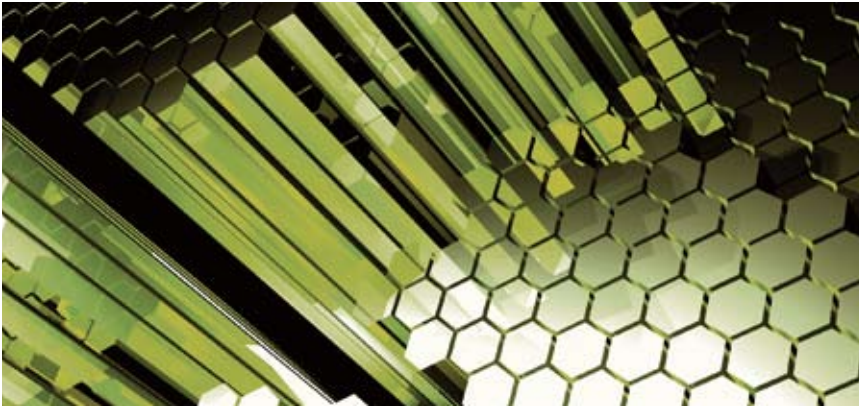
flipping, turning or transforming items on the computer are created with vector graphics.

Mobile devices, only a few years ago were still the domain of the most scarce pixel graphics, but have in the meantime gained impressive processing capabilities. Modern mobile UIs rely heavily on vector graphics, from the implementation of scalable vec-

tor icons on Nokia phones all the way to the design fundamentals of the entire UI on Apple's iPhone.

Interface design is user experience design

The preeminent task of the user interface designer is to ensure the usability of a software product, while providing a memorable user experi-



ence. When designing interfaces of adaptive size using vector interfaces, their unlimited scalability, the flexible re-use of assets and the crisp rendering of real fonts eliminates most restrictions known from raster-based UIs. The real-time calculation of vector graphics even allows for smooth transitions that, besides being visually pleasurable, can be made an essential part of interface metaphors. This enables the designer to make the visual representation part of the flow concept. Animations and transitions are a powerful way to give feedback on ongoing processes to the user.

A huge leap towards the intuitive interface

Vector UIs and their arrival on handheld devices have enabled a whole

new dimension of UI experiences in the mobile field. This is not limited to being extremely pleasurable for the user, it brings the addition of a certain wow factor to a product. This responsive method of generating interfaces in real-time extends the tangibility of modern mobile devices onto their screens, providing the dynamic user experience of an immediate contact with the content, rather than with its virtual representation. This applies in particular to products featuring touch screens, but also to appliances with traditional means of data input.

If there ever can be such a thing as a truly "intuitive" visual interface to a computer, touch screen handheld units with dynamic, vector-based GUI are most likely the closest call so far.

Vector Graphics are graphics created from geometrical shapes, as opposed to bitmaps that compose images from a raster of pixels. Initially primarily utilized in computer games, the power of current computing devices allows for their widespread use even in mobile phones. Raster-based graphics are restricted by their limited scalability, since scaling has a negative effect on their quality. Vector based graphic representations are always calculated from their geometrical shapes in real time, therefore can be adapted and scaled to any screen size.

Valve is an internet agency with a long experience in designing mobile user interfaces, from optimized mobile websites and widgets to standalone application UIs. The Helsinki-based company's clients include Nokia, MySpace, Jaiku and other internationally recognized brands.



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