The Tinker's Toolbox - Jeff Jussel of element14 on Design Challenges

Hosted by Alix Paultre, the Tinker's Toolbox is the Advantage Design Group's web-based interview show where we talk about the latest technology, components, and design issues for the electronic design engineering community.

In this podcast we talk to Jeff Jussel, senior director of global technology marketing at element14 about critical challenges to the engineer throughout the design process. element14 recently released a study that revealed several pain points among engineers – increasing time pressures, incomplete/inaccurate information from relevant sources, and difficulty comparing options. Additional findings included info on things like a majority of respondents citing the earlier stages of design as the most challenging (consuming an average of 41% of design time) issue facing them today.

Right-click to download the podcast [1]

Here is a link to the podcast in case the play button is not working: element14 interview [1]

Here's a link to the industry report on the element14 website: http://www.element14.com/community/docs/DOC-37271 [2]

Here's a press release on the study:

element14 [3], a collaborative community and electronics store for design engineers and electronics enthusiasts, today announced the results of an independent study conducted by Technology Forecasters (TFI) [4] to determine critical "pain points" for global electronics engineers during the four stages of design – concept, design, prototyping, and pre-production. The study revealed several design challenges, including increasing time pressures, incomplete or inaccurate information from relevant sources, and difficulty comparing options and alternatives.

The study [5], "Design with Efficiency: Toward a Streamlined Process for Electronics-Industry Design Engineers," surveyed more than 300 design engineers of varying age groups, working in diverse industrial sectors throughout the Americas, Europe and Asia-Pacific. It offers a unique insight into the top issues impacting today's design engineering workflows.

"We asked design engineers from around the world specifically what they need to significantly improve their design efficiency. An overwhelming majority of respondents believe they spend too much time on processes that could be improved through better approaches to managing the vast amount of information available," said Pamela J. Gordon, CMC, TFI. "Our findings underscore the electronics industry's need for a more consolidated solution that helps advance the design process."

Addressing Today's Electronic Design "Pain Points"

The study underscores element14's commitment to enhancing the design process, giving engineers consolidated design resources, increased collaboration with peers worldwide who are working on similar stages of the product design lifecycle, and access to reliable search sources. The key findings include:

- More than 70 percent of design engineers rely heavily on online forums, blogs and engineering communities to collaborate with peers and share insight on components and design processes
- Engineers spend about 50 percent of their research time online, coupled with the remaining time spent talking with vendors, customers and using internal tools
- A majority of respondents cited the earlier stages of design as the most challenging, with an average of 41 percent of design time spent on concept development
- Specialised information as well as performance failure rates and component lifecycle data are particularly difficult to collect
- A lack of consolidated online tools and databases hinder their ability to make accurate comparisons

Survey respondents also provided insight into the specific challenges they face when using online tools to sift through large volumes of data, including the problem caused by limited access to available data resources to ensure unbiased results, and the difficulty of staying abreast of quickly changing legislation.

“The results of the TFI study underscore the value-add of a consolidated online resource such as the element14 knode [6], our unique ***intelligent online search and knowledge tool*** which helps engineers accelerate the design and development stages of their work to bring products to market faster than ever before, underpinning the power of the web” said David Shen, Group Senior Vice President and Global Head of EDE and Technical Marketing, Premier Farnell. “element14 is committed to supporting engineers in their research, design, development, and manufacture by improving access to the latest information from one central point. We’re proud that hundreds of thousands of engineers worldwide are already using our online community and unique design solutions to collaborate with industry experts and peers – and the numbers are growing all the time, as more and more engineers discover the value we can provide, as we constantly enhance our web offering to meet their needs.”

The growing database of design tools, services and components accessible through the element14 knode [7] can increase productivity and accelerate time to market, including search automation and configuration for project specific design flows, development tools and application reference designs, operating systems and stacks, development and CAD tools, and PCB services and test solutions. Engineers can then quickly and easily click-through to purchase the full range of technology needed to support the design, prototype and ultimately manufacturing process.

“Engineering teams worldwide are faced with increasing pressures to find design resources faster, while running parallel projects, and need access to many services beyond just component supply” said Shen. “The element14 community and knode address many of the top challenges facing engineers globally by giving design engineers immediate access to a wide spectrum of electronic design solutions to quickly research, evaluate and purchase quality solutions, software and services, helping save hundreds of hours in the design process. Some have even called it ‘Google for engineers’ such is the value it brings.”

The element14 knode simultaneously connects engineers to relevant design information, Cadsoft’s award winning Eagle PCB design software, leading technology companies through its premier partnerships with top suppliers, such as Analog Devices, Texas Instruments, Altera, Microchip, NXP and our latest global franchise Micrium, as well as experts and peers. In addition to targeted searches for specific design solutions, engineers can access an Expert Learning Centre offering application notes and technical papers across a broad range of technologies, platforms and components. Beyond these tools, engineers benefit from element14 community resources, including a comprehensive legislation page [8] to simplify industry regulations, valuable insight from renowned engineering professionals through “Ask the Expert [9]” panels, and technology training events and webinars

[10].

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