

Three Ways Engineers Can Leverage the Web

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As technology continues to evolve, there are new ways to leverage the Web to increase knowledge and efficiencies. With an array of interactive, on-the-go opportunities ranging from online collaboration and crowdsourcing to mobile platforms, engineers have a growing number of resources at their fingertips. Engineers that use Knovel, for example, save time by tapping a trusted source of online technical reference information as they research product development and design options, best practices, safety, compliance, and materials for a wide range of products across all industries. Long gone are the days of going to one or more physical libraries to skim through books for answers and manually copy a source or an equation into a notebook. Today's fast paced work environment requires fast access to information and/or people that provide answers. The following are three additional ways engineers can leverage the web:

1. Grow Your Community

Consider the notion that “community” is no longer confined to a physical location. Social networking tools, including Facebook, Twitter and LinkedIn, have changed how we interact with friends, colleagues, peers and even strangers. Using social platforms to collaborate, share best practices and discuss ideas can be highly useful. During a social networking webinar hosted by Knovel last winter, an Outsell, Inc. analyst highlighted key findings of a 2009 engineering survey, including the following:

- 56 percent of engineers surveyed use a social network;
- 1/3 use social networking for professional purposes; and
- 27 percent use LinkedIn for professional, or both professional and personal purposes.

As engineers seek answers to a variety of technical questions, they may discover the best answer may not be from the engineer down the hall. Why not query a

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larger pool of experts in the engineering community? We can expect to see more sophisticated uses of social platforms, particularly those focused on interests, ideas and problem solving specific to industries such as engineering.

2. Consider Crowdsourcing

Companies including Dell and Proctor & Gamble (P&G) use external networks to collaborate on product development. Dell, for instance, has used crowdsourcing, the act of outsourcing or collaborating with external audiences, to improve its products and services. There are a variety of crowdsourcing models that can be used for product development and R&D to elicit input directly from customers or other engineers willing to share their talents, ideas and critiques.

As engineers become more engaged in “open innovation” and collaborate both intra- and inter-organizationally to solve discreet problems online, companies will find ways to overcome concerns about proprietary IP and security when engineers are talking to other, potentially competitive, organizations. One way they may do this is by focusing on discreet problems that are simply a subset of the overall project—this way, the external community cannot identify the whole.

3. Access Applications & Information On-the-Go

Mobile devices, such as smartphones and tablets, give users immediate access to information and allow them to collaborate anytime, anywhere. Recognizing this rising mobile tide, vendors are evolving functionality to ensure users can connect to their software and other applications via mobile devices.

Cloud computing enables engineers to be more mobile, and more importantly, better able to collaborate with peers across the world. You can see this with server side applications that are now being developed to compete with established CAD, CAE and process design systems. These newer systems will provide a more easily accessible, lower-cost alternative.

Collaborative Web-based technologies are increasingly in high demand by organizations that maintain global staffs, have employees who work remotely or with independent contractors. As today’s product design and development issues become more complex, engineers will want to seek expertise beyond company walls and the Web will surely prove to be valuable. Additionally, as experienced engineers retire, the Internet will be heavily incorporated into the next generation engineers’ workflow and relied upon as a teaching tool in the workforce. Creating a virtual work environment allows engineers to collaborate on projects and ensure everyone is ‘in the know’ regardless of their geographic location or level of experience.

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