

wherein anyone could hyperlink any document to any other; a mouse-click would cause the system to retrieve a linked document from any location. In 1990 he *offered* to build such a system at CERN, and in 1991 to help the hypertext research community set up Web servers. He *executed* by putting together programming teams to develop good Web software and make it available for anyone to use. He *stimulated adoption* by visiting many sites and attending many conferences to tell people about his system, always soliciting new software, servers, and browsers. In 1993, Marc Andreessen, a student at University of Illinois inspired by Berners-Lee, developed Mosaic, the first universal, easily installed graphical browser. Thereafter, users' adoption of the Web spread like wildfire. In 1994, Berners-Lee founded the World Wide Web Consortium, hosted by MIT and CERN, to support *sustainable integration* of the Web in systems worldwide and to preserve the Web in the public domain by creating open software and standards for the Web. Throughout, he *exercised leadership* and recruited ever-larger numbers of followers and Web supporters. He articulated a small set of guiding principles for Web development and stuck with them. He refused to let the Web "go private" or to become wealthy from his own invention. He said the cause was too important and too big for his personal considerations to get in the way.

The second example is blogging, the practice of providing one's diary or regular commentary via a "Web-log" Web site. The idea first appeared in 1997. Open source software developers contributed tools that helped bloggers create Web sites and readers manage their subscriptions. The idea propagated via Internet discussion forums and was given a big boost in 2001 when the mainstream news media reported that bloggers were influencing political debate. In 2005, the number of blogs was estimated at 50 million. This example is interesting because there was no single inventor or innovator, only a community coordinating through Internet discussion groups. The seven practices were there, distributed among many people, but no one took responsibility for the whole. It is difficult to say how common "distributed innovation" of this sort will be in the years ahead.

CONCLUSION

Our main claims are:

- Innovation occurs when a group or community adopts a new practice.
- Invention and innovation are different skill sets.
- The language-action framework helped identify seven practices that constitute the innovation skill set.

- Anyone can learn the innovation skill by mastering the seven personal practices.

In the popular view, innovation is the product of the fertile, creative mind, the work of the "lonely genius": a cognitive process. Our framework shifts the emphasis to interaction. Innovation means not only that a group or community adopts new practices of interaction, but the way to arrive there is through seven kinds of interaction with those groups and communities.

Internet technologies can help the innovation process by communicating ideas, coordinating those who are working toward adoption, and distributing software and data. These are, however, only facilitating technologies. The outcome (people adopting new practice) is still brought about by people who embody the verbal and somatic skills shown in Figure 2. Technology cannot replace them.

We believe that the seven foundational practices are the missing link in our understanding of innovation. We have been teaching them to students and clients for over 15 years. We have seen dramatic improvements in their results. The same can happen for you. **C**

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PETER J. DENNING (pjd@nps.edu) is the director of the Cebrowski Institute for information and innovation and superiority at the Naval Postgraduate School in Monterey, CA, and is a past president of ACM.

ROBERT DUNHAM (bdunham@enterpriseperform.com), founder of Enterprise Performance, Inc., teaches people how to be leaders, managers, and innovators in programs offered through his company and at Presidio School of Management. He previously led workflow technology development at Action Technologies.