McLuhan for Testers

by Michael Bolton

If a tester is "somebody who knows that things can be different," then Marshall McLuhan was a tester par excellence.

Testing is about noticing things that have escaped the attention of others, and thus one of the fundamental questions of testing is "What haven't you noticed lately?" This provocative question is at the heart of *McLuhan for Managers: New Tools for New Thinking*, by Mark Federman and Derrick de Kerckhove (see the StickyNotes for references). This book helps explain and contextualize McLuhan's work for managers and other people who are in the business of innovation.

McLuhan, an English professor, realized that words are often powerful because their meanings are slippery, ambiguous, and elusive (and allusive and illusive). His own words and ideas were often confusing and contradictory, but this was deliberate. Rather than rejecting ambiguity, McLuhan embraced it. His intent was to *probe*—to investigate and explore ideas with thinking tools that included metaphor, paradox, and even satire—with the intention of anticipating and revealing potential consequences of new media.

Few people understand what McLuhan meant by his dictum, "The *medium* is the message." A medium, in McLuhan's terms, is not merely a communication channel but anything from which change emerges. Media can be tools, descriptions, devices, thoughts, artifacts, technologies, or concepts—anything humans invent, develop, or use. Every medium, from a television to a teething ring to a tautology, appears as a new figure in some contextual ground. The *message* of a medium, said McLuhan, is not its content but rather its effects—the impact of that figure on the existing ground. We experience different messages of a medium depending on the ground we observe. What is seen as ground depends on who is observing and on the conscious or unconscious choices that he brings to the observation.

If we extrapolate this view to testing, some new requirement, function, feature, or product is a medium. How might we sharpen our evaluation of it? McLuhan proposed that every medium can be submitted to four *probes*—testing heuristics—that he called the Laws of Media (see the StickyNotes for a reference).

Every medium *extends*, enhances, intensifies, accelerates, or enables some human sense or faculty in some way. A medium may allow us to see things more closely or more clearly, manipulate things at a distance, perform tasks more quickly, or reframe our perspectives. *What capabilities does the medium extend?*

For example, the latest cell phone/PDA devices extend our presence at a distance, enabling us to hear people far away and enabling them to hear us. PDAs extend our mobility, our memories, and our ability to organize information.

Every medium *obsolesces* at least one current medium—possibly several. An obsolescent medium no longer has the force to influence change. It may have been useful or even pervasive, but the new makes some aspect of the old irrelevant. The new medium doesn't necessarily replace the old; it may merely cause the old to fade further into the ground, to be taken for granted and easily ignored. *What medium or media do the new medium obsolesce?*

The new PDAs naturally obsolesce the corded phone, the pay phone, and email's tie to the desktop. By making point-to-point communication possible without travel, the PDA also obsolesces the letter, the fax, and the automobile.

ISTOCKPHOTO

Every medium, when stretched to the limits of its capability, *reverses* into the opposite of its original effect. Reversal effects are emergent; they may be apparent immediately, or they may not be realized until the figure fades into the ground and becomes ubiquitous. *How might the message of the medium eventually become reversed from its original message?*

A PDA cell phone makes distant people accessible but often thwarts communication by interrupting conversation with someone who is physically present. Although it frees us from our desks, the cell phone puts our desks wherever we might be at any time of the day or night.

Every medium *retrieves*, in some new form, the idea of a previously obsolescent medium. The retrieved medium may be from long ago or from a radically different field, but the new one reminds us of the old via one of the Laws of Media effects. This probe points us to consider the message of retrieved medium, allowing us to anticipate similar messages

from the new. *How did things change when the retrieved medium appeared as a new figure in its corresponding ground?*

The long-distance-communication aspects of the PDA retrieve the idea of the Pony Express. Its rich feature set might remind us of the all-in-one, printer-scanner-fax combination. The PDA also retrieves the idea of the Tamagotchi—the electronic pet that would interrupt you periodically and die if you didn't feed it and clean up its mess.

To a tester, the latter two Laws of Media are especially interesting. When we're evaluating requirements or new features, it's useful to consider *retrieved* benefits and problems that accompanied earlier media, while *reversal* effects help us anticipate things that we might not otherwise notice—in particular, effects on people. Every ten miles, the Pony Express required reliable relay stations that had to be provisioned and maintained with redundant backups. All-in-one devices were useful, but many early ones suffered from poor feature integration, poor usability, and flaws in one component that could render the others useless. When we don't have to walk to the copier, do we reduce interaction between people in an organization? To feed a Tamagotchi, we simply had to press a button—might we respond equally trivially to a PDA? The Laws of Media in general help to remind us that a product or a feature that we're testing has not only echoes in the past and future but also deep connections with present systems that may extend far beyond the application under test.

Recently a tester asked in the software-testing mailing list (see the StickyNotes for a link) about problems he had noticed after his organization had implemented a dedicated testing team. Managers perceived that the developers felt a reduced need to check their own code—so the organization produced worse code after the test team was created.

Using the Laws of Media, I was able to suggest that the test team is a medium that *enhances* the ability of the project team to learn about the product, to recognize problems, and to report status. The test team *retrieves* the idea of the test

pilot, the food taster, the editor, the lab researcher. It *obsolesces* the field technician, the support center, the unhappy customer—and the careful developer. And it *reverses into* the team *not* learning about the product, *not* recognizing problems, and *not* reporting. Under what circumstances might these effects occur, and what might they lead to? Automatic confirmation of trivial test ideas, for instance? Product managers abdicating responsibility for release decisions?

When faced with a requirement to evaluate, a feature to test, a test approach, or an organizational change, the Laws of Media might help you notice what might be extended, retrieved, and obsolesced—and how you might anticipate and manage some of the reversal effects. As McLuhan said, "To understand media, one must probe everything … including the words … and one's self." **{end}**

Michael Bolton lives in Toronto and teaches heuristics and exploratory testing in Canada, the United States, and other countries. He is co-author, with James Bach, of Rapid Software Testing *and a regular contributor to* B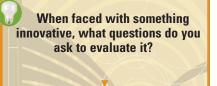etter Software *magazine. Michael would like to thank Mark Federman for his generous gift of many stimulating and challenging conversations and for his review of this column. Contact Michael at mb@developsense.com.*

STAR WEST SPEAKER