Why It Matters

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Intelligent Readers,

Like most of us, I sometimes wonder whether what we do matters. Most of the research we do, or technologies we work on, take a long time to transition to the outside world, if they ever do. Going to meetings aimed at explaining what we do to nonresearchers, something I’ve been doing all too much of lately, is often an exercise in frustration. People who focus on short-term benefits or know only what’s possible on their machines today simply don’t understand research’s role in the development of new technologies. Although life in the R&D world has some nice features, sometimes I wonder whether it makes a difference.

Other times, however, something catches my eye that tells me what we do is worth it. For example, read the following short essay (based on a blog) by Jie Bao, a Chinese postdoctoral student at Rensselaer Polytechnic Institute:

You must have already known about the huge earthquake that occurred on May 12 in Sichuan, China. It has caused enormous loss of lives: more than 50,000 confirmed deaths, around 30,000 missing, plus about 300,000 people injured as of today. The whole nation, as well as Chinese all over the world including me, are in deep sorrow over the tragedy.

For a memorial of the earthquake victims, on May 19 at 14:28 pm (Beijing time), exactly one week after the earthquake, the Chinese public held a moment of silence. National flags were flown at half-staff and people stood silent for three minutes, while civil defense sirens and the horns of vehicles, ships, and trains sounded.

Google China released a traffic curve for the three minutes (http://googlechinablog.com/2008/05/blog-post_22.html). At the lowest point, it dropped to 10 percent of the normal traffic. At the time, millions of people stopped their work on computers, stood up, and lowered their heads to observe the moment of silence. The curve clearly conveys a message of the national unity of the Chinese people in a time of calamity. I’m proud to be part of the people.

The Web is playing an important role in the earthquake relief this time. Messages and information are exchanged on the Web much faster than traditional ways of helping rescue work. For example, when a girl heard that army helicopters couldn’t find a landing site around her home town, she immediate posted a good location on the Internet (http://tieba.baidu.com/f?kz=378584541), and it was replicated thousands of times across many sites in just a few hours, until it reached the army command. For another example, when all communication avenues were cut off from the outside world, one of the first messages from the isolated area was from the local government Web site (www.abazhou.gov.cn), which was revived by backup power and links. Owing to reports from the Web site, it was decided to use an airdrop instead of land rescue for some areas; otherwise, help would have arrived too late.

This can still be improved. With the Semantic Web, such information can be propagated by software agents, instead of human forwarding, in just seconds to a helicopter pilot’s handheld device. In earthquake relief, every second saved in knowledge aggregation and propagation means more hope for lives.

What struck me isn’t just the Web and other information technologies’ important role in these rescue efforts, but especially the comments in Jie’s final paragraph. Looking forward, he reminds us that deploying new tools that use semantics, agents, and other AI technolo-
In the May/June ’08 article “Interlinking the Social Web with Semantics,” by Uldis Bojārs et al., the last line in the sidebar on page 30 was inadvertently cut off. The final list item should read,

Tom Morris has created a third-party RDF exporter for the Twitter microblog service that uses SIOC (to represent all microblog entries) and FOAF (to describe the people).

We apologize for the error.

What we do matters, and I thank Jie for reminding me, and all of us, of this.

What we're striving to develop can have an impact. Think, he reminds us, of the many more lives that might have been saved with better AI technologies and more automation.

In the last decade, agents and data mining have emerged as two of the most vigorous areas in information technology. The nature and complementarity of both areas foreshadows an emerging trend—the increasing interaction and integration between agents and data mining. A symbiotic relationship could significantly strengthen each side’s progress and trigger new R&D challenges and prospects toward the advancement of next-generation intelligent technologies and systems as well as the enrichment of integrated intelligence and other emergent aspects.

This special issue aspires to report pioneering action on this critical topic and aims to encourage the interaction between agents and data mining toward mutual enhancement and superintelligent techniques and synergism. It will bring together researchers and industry practitioners from both areas to share R&D results and discuss existing and emerging theoretical and applied problems in the interaction and evolution of agents and data mining.

Topic areas include (but aren’t limited to)

• interaction challenges and prospects,
• agent-enriched knowledge discovery and data mining,
• data-mining-driven agent intelligence enhancement,
• agent-mining symbiosis performance evaluation, and
• emerging intelligent applications and systems.

Submissions should be 3,000 to 7,500 words (counting a standard figure or table as 200 words) and should follow the magazine’s style and presentation guidelines (see www.computer.org/portal/pages/intelligent/mc/author.html).

References should be limited to 10 citations. To submit a manuscript, access the IEEE Computer Society Web-based system, Manuscript Central, at https://mc.manuscriptcentral.com/cs-ieee.

Questions?

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