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FRONTIERS IN DIGITAL SECURITY

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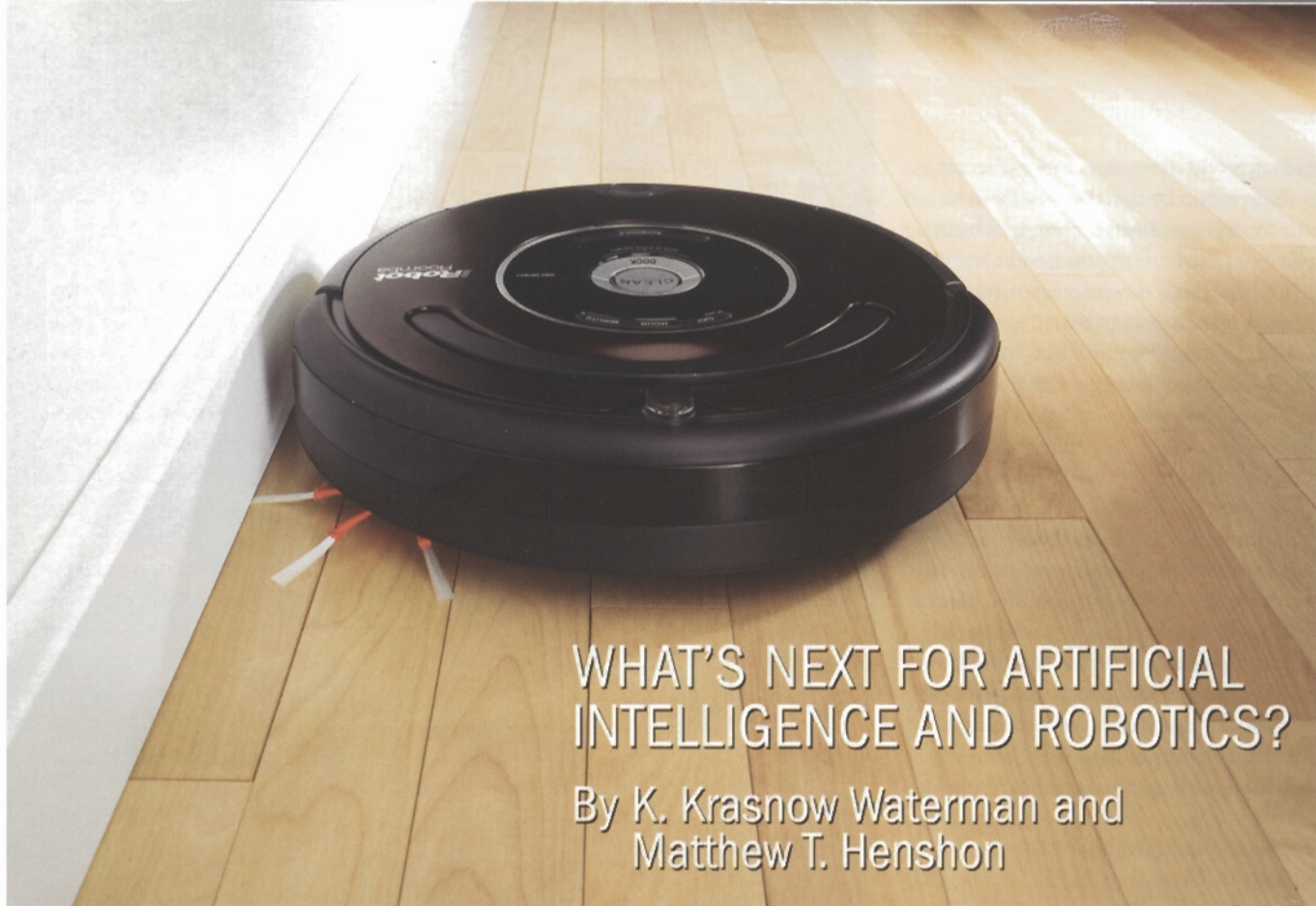
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WHAT'S NEXT FOR ARTIFICIAL INTELLIGENCE AND ROBOTICS?

By K. Krasnow Waterman and Matthew T. Henshon

PHOTOGRAPH: iRobot Corp.

The law provides a means of defining relationships between people. For example, contract law defines the relationship between persons in privity. Tort law defines the relationship between an injured person and the person who caused the injury. Constitutional law (especially that portion dealing with civil rights) defines the relationship between the majority of society (i.e., the government) and the individual.

If a robot or a software program can emulate a human, is there a point at which the law does or should recognize it as a distinct entity? This year, the ABA's Section of Science & Technology Law initiated a new Artificial Intelligence and Robotics Committee and answering this question seems to be one of the major conceptual challenges it faces.

When the movie *2001* was released in 1968, the idea of a computer exercising independent judgment seemed far-fetched. By the time *I, Robot* was released in 2004, it seemed very possible. We have grown accustomed to the forward progress of robotics in everyday life—from Roomba vacuums cleaning our floors to military drones

patrolling our borders. Today we routinely ask software to handle repetitive tasks or to answer hard questions.

There are mileposts to guide how the law should consider a "new entity." Traditional manufacturer-liability law may make a manufacturer presumptively responsible for its "goods," as the Ford Motor Company was (infamously) for the Pinto. Interestingly, the development of the law of corporations is essentially the ability of one or more individuals to agree to act collectively and, provided proper "corporate form" is observed, the new entity can shield the individual shareholders from liability for that entity's actions.

As the Committee begins to explore the issues of concern, there is a core question: Should the law treat "reasoning machines" differently from other machines? For example, today when a car runs amok, jumps a sidewalk, and injures people, the courts determine the liability of the driver, the manufacturer, or the mechanics. Soon, there could be a circumstance in which a machine's malfunction is not clearly the fault of any particular human.

Other areas of the law will need to be explored as well. Consider original works of authorship, governed by copy-

right law: It is a long-standing academic joke that an infinite number of monkeys typing will eventually produce the complete works of Shakespeare. But in a world where machines are producing artistic works—music, if not theatrical productions—and especially if the machine is able to adapt its learning based upon experience, what is a "work-for-hire"? And what if a machine finds a cure for cancer? Will it matter if the technology was purchased or leased, and what new information was introduced by the "owner"? Conversely, what if a machine found but failed to identify false information and used it in reaching and reporting conclusions?

Turning to the area of contract/agency law, can a machine act as an agent for a party? Software companies are now beginning to offer programs that can write contracts and other programs that interpret them—we are rapidly approaching a point at which a "contract" might be formed that will not have been considered by humans at all—unless and until there is a material breach.

And predictive technologies—a form of artificial intelligence—have begun playing a role in financial

DANGER, WILL ROBINSON! ISSUES FOR EMERGING CLIENTS IN BOTS, ROBOTS, AND OTHER ARTIFICIAL INTELLIGENCE ENTERPRISES

The Artificial Intelligence and Robotics Committee is offering a CLE teleconference in the fall of 2008. The program will show how human-replicating technologies and the law are affecting each other. Examples will range from cruise control and self-driving cars to automated mortgage and insurance underwriting. Also, the committee will open discussion on regulatory or statutory changes that may be appropriate. Keep checking www.abanet.org/scitech/ for registration details.

transactions, from pricing options and derivatives to evaluating credit scores and automating the underwriting process. And as the recent upheaval in the financial markets has demonstrated, underestimating the chances of a "100-year flood" has real-world consequences, and legal consequences both for borrowers and lenders.

This exploration is no longer just science fiction. Courts already permit a variety of legal structures to account for the needs and rights of people, animals, and things other than sentient adults.

There are guardians for minors, incompetent adults, and even animals. There are cases captioned with inanimate objects as defendants, such as those for the seizure of things where ownership is unknown or unproved.

The Artificial Intelligence and Robotics Committee has been started to explore some of these issues, and to help define ways that the legal community should be thinking about these types of problems and challenges. The work of the Committee touches upon and is influenced by other ABA com-

mittees, including insurance/liability, financial services, intellectual property, and homeland security.

Others are starting to also take note of the new issues raised by the growth in Artificial Intelligence and Robotics—for instance, in Congress, a new Robotics Caucus has been formed by Reps. Mike Doyle (D-PA) and Zach Wamp (R-TN) to help identify areas where the federal government may have a role.

We look forward to working with you, in various areas of the Section of Science & Technology Law, as we seek to find answers to these and similar questions. ♦

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