

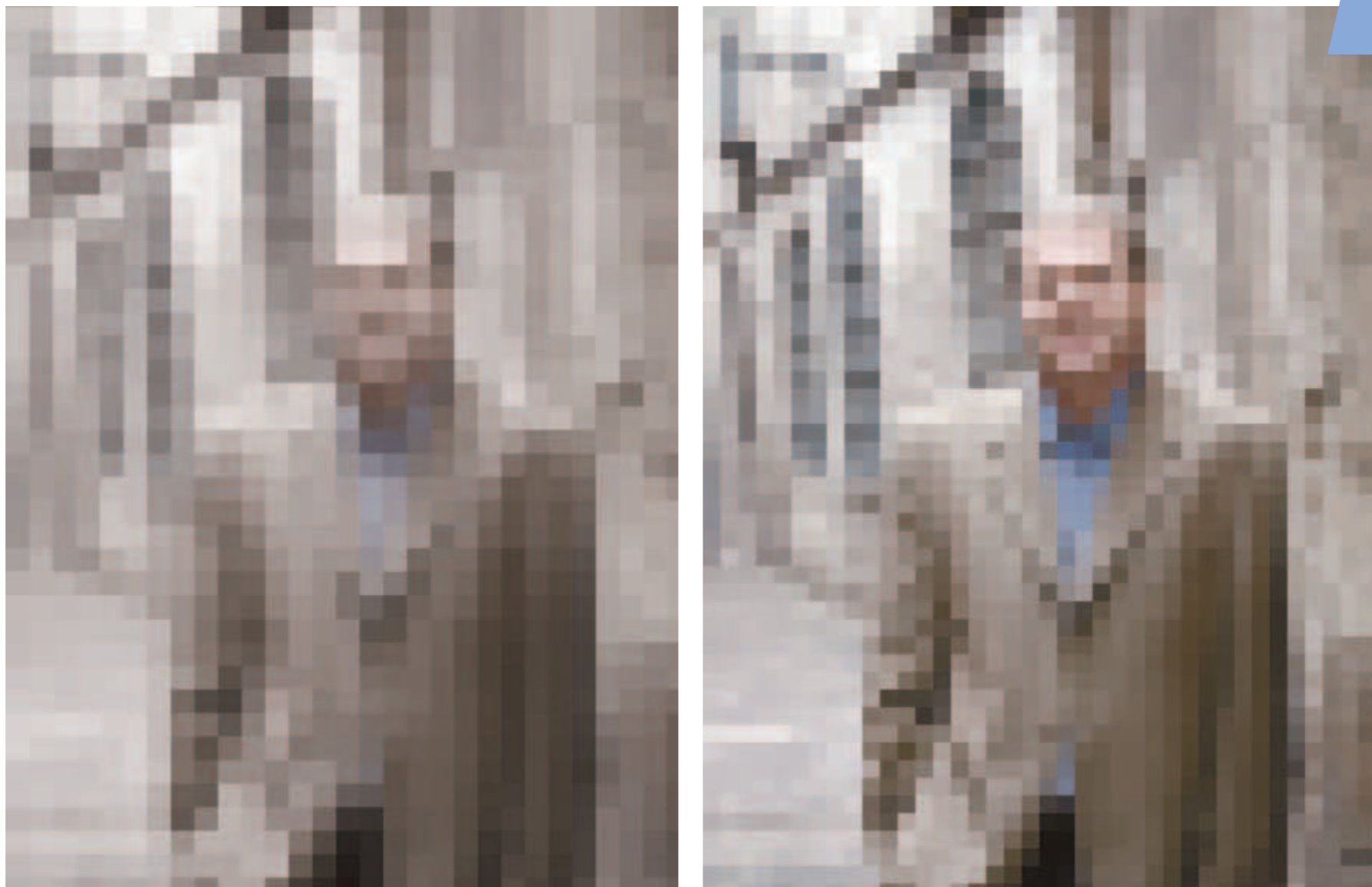
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DIG DEEP: This is
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JAMES BAGNALL
The case for India's
continuing rise as a
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techweekly



WILL TECHNOLOGY KILL ANONYMITY?



PHOTO: ERIN SMITH; PHOTO ILLUSTRATIONS: ROBERT CROSS, FOR TECHWEEKLY

For Ottawa's **IAN KERR**, that's the \$4-million question.
The tech law star heads an international project studying how networks,
databases and the Internet are destroying privacy **PAGE F3**

THE \$4-MILLION MAN



IAN KERR'S MISSION:

Probe the legal, ethical and political implications as anonymity erodes in a networked world

BY KATE HEARTFIELD

You would think that with a \$4-million grant in his pocket, Ian Kerr might buy himself a Shift key. Kerr, the University of Ottawa's recently hired expert in the emerging field of technology, law and ethics, sends exclusively lower-case e-misses to students, colleagues, and journalists. OK, his keyboard may not be faulty, but his cap-less messages gives the impression of a low-key, informal correspondent — when Kerr is, in fact, a super-achiever.

Just 38 years old, he has received the second largest grant awarded by the the Social Sciences and Humanities Research Council of Canada for legal research. The grant, announced this week, more than justifies U of O's enthusiasm when it hired him in 2000 to hold the Canada Research Chair in Ethics, Law and Technology. Kerr's star is also rising internationally. He sends his e-mails these days from Barcelona, where he is a distinguished visiting scholar at the Universitat Pompeu Fabra, on leave from U of O until next fall. He is to take a short sojourn from Spain to the Caribbean early next year, slated to head to Puerto Rico to teach a course in cyborg law, focusing on the line between humans and machines, and how law and ethics can keep pace with the blurring of that line.

These days, the academic world is Kerr's oyster — as one might expect for a young professor with an ability to see into the future and no shortage of insights in a seriously trendy field.

"A lot of attention is paid to my work because it is timely," says Kerr. "Right now, especially with shifting world events, there is an interest, but also an extreme, critical urgency in solving some of these issues I happen to be working on."

Perhaps it helps that he has a knack for addressing tech's top-of-mind topics from an intriguing vantage point. Consider the



PHOTOS: ERIN SMITH, FOR TECHWEEKLY

Currently a visiting scholar in Barcelona, Ian Kerr is getting \$1 million a year for four years to head a team looking into the legal, ethical, and political angles to the decline in anonymity brought on by technology.

topics of two recent speeches: "Bots, Babes and the Californication of Commerce" and "ISPs — Internet's Secret Police?"

However, it's the substance and interdisciplinary breadth of Kerr's thinking that has funding agencies throwing grants at him. Kerr believes technology is creating a shift in how humans behave with each other. With respect to privacy and anonymity, increasingly, our identities are known and connected with our actions. Buy a book at the mall, and no one knows what you're reading except the guy behind the counter. Buy a book online, and who knows who might be watching? Kerr wants to understand the effects of this steady loss of anonymity, and find out if there's a way to lessen those effects.

Grants such as Kerr's don't happen to Canadian law professors every day. To put

it in perspective: The U of O, the eighth-most research-intensive Canadian university, receives \$157 million a year in research funding. The prestigious Canada Research Chair award only comes with about \$100,000 a year in funding for five years.

But law professors like Kerr don't come along every day. He isn't afraid to see the big picture, and to gently but enthusiastically force open the eyes of everyone around him, while he's at it.

"I'm very much about things that are around the corner," he says, on the phone from Barcelona.

Speak to Kerr for long enough, and you will discover another subtext to his world — His conversations are peppered with references to rock 'n' roll. Music vied for

Kerr's attention while he was in law school, when he also found time to drum for a band called Jeremy Bentham's Head. A life-long fan of the vintage Canadian rock band Rush, he titled a speech that gave in Ottawa Sept. 30 "Today's Tom Sawyer: Cyborgs, Sousveillance & Civil Disobedience."

When Kerr is asked about what looks like his overnight success in the strange new field of technology law, he bristles as a rock star might.

"You hear this sort of thing with rock bands all the time, about their rush to fame, and they say, 'What are you talking about? I've been working at this for 15 years!'"

When he describes the decline of privacy and anonymity in the modern world, he turns to one of his favourite songwriters for the right words.

"The space between' is a phrase I really like from Dave Matthews. The space between is so vital to a free and democratic society, and it risks extinction."

That is, the space between citizens, and between citizens and technology. Or, as Kerr puts it, the space in which people separate their actions from their identity. People now find themselves identifying themselves more and more often; they give a plethora of passwords for e-mail and online services, register for software, register for domain names. Then there are all the cameras and databases hungry for our information, from red-light cameras to DNA testing.

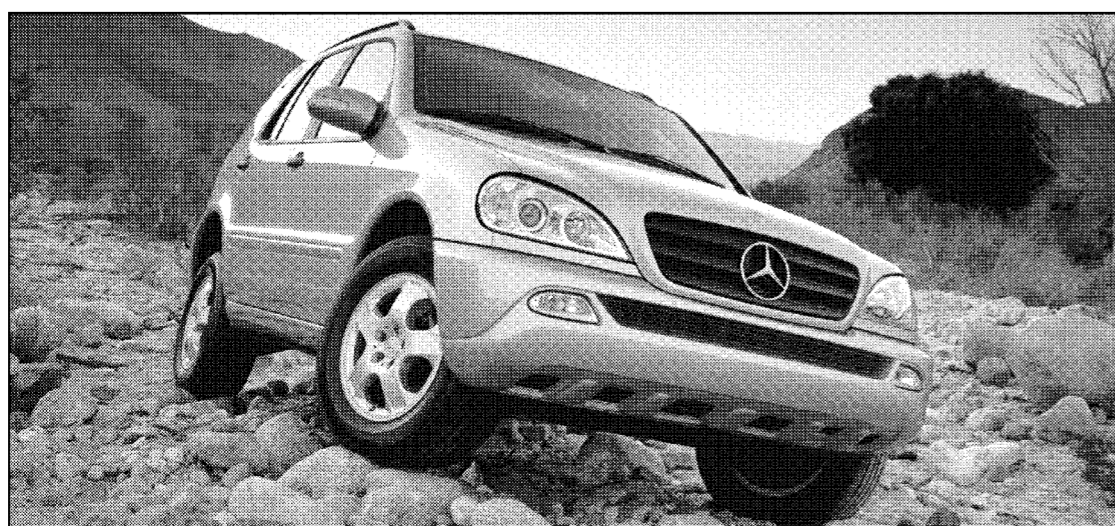
Kerr wants to know whether all of these technological intrusions will consign our privacy rights to extinction. In a world where physical and virtual security trumps almost everything, can we afford to be anonymous? Will our grandchildren look at our assumption of anonymity as something quaint and naïve? Or will we discover how to keep the technology from intruding on the space between?

That is the million-dollar question. Or rather, the four-million-dollar question.

The Canadian government and several industry partners are combining to give Kerr \$1 million a year for four years to head an international team — including some "name" thinkers with arguably bigger reputations than Kerr's — that will study the effect the information economy has on the concept and practice of anonymity.

His project, really a gathering of mini-projects under his supervision, this time lacks a rock 'n' roll reference. It's called "On The Identity Trail: Understanding the Importance and Impact of Anonymity and Authentication in a Networked Society." The project will look into the legal, ethical, and

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THE \$4-MILLION MAN

Continued from page F3

political angles to the steady decline in anonymity brought on by technology.

"It's not only about raising awareness about what the problems might be, but also about developing the skills to solve some of the problems around privacy and technology," he says.

He says he wants the team to come up with some high-level, abstract ideas about this issue. For example, does the right to freedom of expression include the right to surf the Internet in anonymity? But he also wants some concrete recommendations for governments and the developers of technology. For example, how can governments protect anonymity in online voting?

"It's a really interesting project, especially at a time when we're seeing a shift in the balance between privacy and security in light of world events," says Kerr. "The right to speak anonymously is a freedom of expression."

Kerr's international team of 23 researchers includes scientists, philosophers, engineers, bureaucrats and businesses. It includes Ann Cavoukian, the Information and Privacy Commissioner of Ontario; Mark Rotenberg, a leading privacy advocate in the United States; and Steve Mann, the University of Toronto professor and self-described cyborg, known for embracing wearable computers. (Milana Homs, a student who has done research with Kerr, illustrates Kerr's sense of humour by telling the story of the time Kerr offered to meet Mann in a swimming pool.)

"Many of us have recognized something that has gone on almost invisibly," says Kerr of the team. "We used to live in a world where the default position was that people could interact with each other anonymously. We're seeing a shift now, from a world where anonymity was the default, to one where authentication is the default."

Kerr says the project will employ not just the 23 researchers, but also between 80 and 100 undergraduate, graduate and postdoctoral students, conducting research in Ottawa, Montreal, Toronto, London, Calgary, Victoria, Washington, Los Angeles, and London, England. Kerr's role is to bring together these researchers, who are separated by geography, methods, and disciplines.

"You don't want to have a room full of sociologists talking to each other, a room full of philosophers talking to each other, and a room full of technologists building things. It's better to work together and have the ethical and legal concerns inform the global policy, and build it into the technology."

The Social Sciences and Humanities Research Council of Canada, a federal funding agency, recently decided to give Kerr and a research team a grant of \$2,969,584 to study it. Another \$1,037,640, in cash and in-kind contributions, is coming from other organizations and companies.

IBM Canada Ltd.'s contribution is in security and access software and training, at a value of \$183,795. John Kutcy, general manager of education industry for IBM Canada, says IBM recognizes that concerns over the loss of anonymity might inhibit the growth of e-commerce — and that wouldn't be good for IBM. So it's a no-brainer for the company to support the kind of research Kerr is doing.

"We were really interested in assisting him because of the focus he's putting on security and privacy. These are key areas in the industry right now in terms of hot-button issues."

Kutcy says IBM wants to use the results of Kerr's research to better understand what some of the issues are, and then to make action plans to deal with those issues.

"We're keenly interested in understanding the kind of issues Dr. Kerr will be looking at," he says. "Ultimately, what we'd like to be focused on as a company is any research and development that is related to finding solutions to whatever issues come out."

Bell Canada is contributing \$150,000 in cash and \$20,000 worth of staff time to the project. Michael Milton, who coordinates research projects for Bell at universities, says the company's mode of participation in Kerr's project reflects its new way of doing participating in research. Instead of calling for proposals, or throwing money at someone else's project, Bell now puts its researchers in a room with the university researchers in an attempt to capitalize on everyone's knowledge.

"In the knowledge economy, the most important thing you can invest is your knowledge," Milton says.

As for the results of the Kerr project, he says Bell has an interest in understanding Internet law as it evolves, and in understanding the ethics of privacy and security.

"What I'd like to see come out of it is an explanation of why people choose to be anonymous or pseudonymous, the mechanisms that support that, and the challenges that come with it," Milton says.

Big pictures are Kerr's specialty. His work,

'We're seeing a shift now, from a world where anonymity was the default, to one where authentication is the default'



ERIN SMITH, FOR TECHWEEKLY

in Ottawa, Barcelona or elsewhere, requires him to get along with lawyers, engineers, technologists, philosophers — and confused undergrads. He thrives on it. In his mind, he doesn't separate the fields of technology, law and ethics.

That field is so new that North America has only a handful of PhD-level lawyer/academics, such as Kerr, who specialize in it. Originally from Calgary, Kerr studied biology in Alberta before switching to philosophy. By 1995, he had his PhD in philosophy and his LLB in law from the University of Western Ontario, in 1995. After articling in law, he taught law and philosophy at Western.

Universities often don't know where to pigeonhole him. At Western, he had a three-way appointment to the faculty of law, the faculty of information and media studies, and the department of philosophy.

"As a result of being in three different faculties in three different disciplines, I learned to weave my way between them, and create work that's interesting to all three of them," Kerr says.

At the University of Ottawa, he is part of a group of technology experts making a name for themselves in the school's faculty of law.

When Bruce Feldthusen became dean of common law at the U of O in 2000, Michael Geist (now a fellow holder of a Canada Research Chair) was the only professor there working on the field of technology law. "I wanted us to grow, so I went to Michael Geist and asked him who was the best in this field in Canada, and he said, 'Ian Kerr.'" Feldthusen brought Kerr to the U of O that year, and couldn't be happier about all the attention Kerr now attracts.

"He's hot, there's no doubt about it," Feldthusen says.

Kerr and Geist collaborate on many things, including the recent development of an e-commerce law lab at the school.

With other professors at the U of O, Kerr recently received a grant of \$500,000 from Bell University Labs and the Ontario Research Network for Electronic Commerce to support a three-year project: "An Examination of Digital Copyright Issues and Fundamental Aspects of Current Canadian Copyright Reform." Parts of that project will overlap and complement Kerr's anonymity research.

Such a proliferation of grants and projects might mean less time in the classroom; the Canada Research Chair, for example, provides Kerr with a break from teaching, which allows him to be in Barcelona now. But Kerr loves teaching and is immensely popular with students, according to Feldthusen.

"He's an excellent communicator. He's like a stage actor in the classroom. There's no white noise when he's in a room."

Homs, the student who has worked as a research assistant with Kerr, calls his style "mesmerizing."

"He's sort of like a smart uncle. He's someone you want in your life. He calls you on your birthday, for example. I've never had a professor who called me on my birth-

day. But at the same time, he's really hard on us, has really high expectations of us."

Tyseer Aboulnasr, the U of O's dean of engineering, says she invites Kerr to speak to engineering students every year, and he always has the students in stitches while he gets them to think about ethics.

"He provides the balance between the ethicists, the lawyers and the engineers. He takes them into

the grey area that's between the edges and tries to increase their understanding. The Internet is obviously creating a lot more grey area than there ever was before."

Over the next four years, Kerr will do the same for his eclectic team. He doesn't seem daunted by the idea. But this is a guy who has become an expert in a field that most people aren't even aware of. He doesn't daunt easily.

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December 12 • 7:30 a.m. - 12:00 p.m.

The Partnership Conference Series - Sheraton Hotel
New Challenges in High Tech Project Management
 Given the hectic pace of competition and market development, project management is assuming an increasingly important role in the lives of technology companies. With traditional operating routines failing to keep pace with market dynamics, organizations are crafting new routines based upon dedicated time and resource sensitivity. However, the rush to deliver just-in-time services and products to markets with rapidly changing preferences has not been accompanied by any proportionate evolution of project management guidelines from standard organizations. This session will examine the gaps between the main body of knowledge in project management and the state of the art in leading-edge practice.

December 16 • 12:00 p.m. - 4:40 p.m.

CITO/OCRI TechTalk - Communications Research Centre
Transmitting Touch Over Networks
 Ubiquitous mobile broadband communications has revolutionized the use of vision and sound as media for telecommunications. We are now reaching beyond these cerebral senses and looking at the opportunities and challenges for bringing touch to the web through haptic technology. The first generation of these capabilities relies on the real-time transmission of force vectors in conjunction with either tele-robotic or virtual reality applications. This Tech Talk will highlight the developments in haptics technologies emerging from the research of Ottawa-based experts. Topics include: human communication; interaction; learning and training; applications in surgical environments; tele-robotics; and military applications.

December 17 • 11:30 a.m. - 1:30 a.m.

I.T. in Healthcare - University of Ottawa, Smyth Rd. Campus
The Use of Open Source in Healthcare
 The presentation will provide a brief history and overview of international open source activity in healthcare. Specifically, the presenter will explain the open source model in the context of where and how it is being applied to software development and dissemination in health care as well as a brief overview of some collaborative communities such as Open Source Health Care Alliance (OSHCA). Three or four examples of open source health care applications including electronic health record systems for family medicine and hospitals will be presented. The session will close by highlighting: Canadian challenges; benefits and trends relating to the adoption of open source processes; and applications.

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