Sleuths Crack Tracking Code Discovered in Color Printers

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It sounds like a conspiracy theory, but it isn't. The pages coming out of your color printer may contain hidden information that could be used to track you down if you ever cross the U.S. government.

Last year, an article in PC World magazine pointed out that printouts from many color laser printers contained yellow dots scattered across the page, viewable only with a special kind of flashlight. The article quoted a senior researcher at Xerox Corp. as saying the dots contain information useful to law-enforcement authorities, a secret digital "license tag" for tracking down criminals.

The content of the coded information was supposed to be a secret, available only to agencies looking for counterfeiters who use color printers.

Now, the secret is out.

Yesterday, the Electronic Frontier Foundation, a San Francisco consumer privacy group, said it had cracked the code used in a widely used line of Xerox printers, an invisible bar code of sorts that contains the serial number of the printer as well as the date and time a document was printed.

With the Xerox printers, the information appears as a pattern of yellow dots, each only a millimeter wide and visible only with a magnifying glass and a blue light.

The EFF said it has identified similar coding on pages printed from nearly every major printer manufacturer, including Hewlett-Packard Co., though its team has so far cracked the codes for only one type of Xerox printer.

The U.S. Secret Service acknowledged yesterday that the markings, which are not visible to the human eye, are there, but it played down the use for invading privacy.

"It's strictly a countermeasure to prevent illegal activity specific to counterfeiting," agency spokesman Eric Zahren said. "It's to protect our currency and to protect people's hard-earned money."

It's unclear whether the yellow-dot codes have ever been used to make an arrest. And no

one would say how long the codes have been in use. But Seth Schoen, the EFF technologist who led the organization's research, said he had seen the coding on documents produced by printers that were at least 10 years old.

"It seems like someone in the government has managed to have a lot of influence in printing technology," he said.

Xerox spokesman Bill McKee confirmed the existence of the hidden codes, but he said the company was simply assisting an agency that asked for help. McKee said the program was part of a cooperation with government agencies, competing manufacturers and a "consortium of banks," but would not provide further details. HP said in a statement that it is involved in anti-counterfeiting measures and supports the cooperation between the printer industry and those who are working to reduce counterfeiting.

Schoen said that the existence of the encoded information could be a threat to people who live in repressive governments or those who have a legitimate need for privacy. It reminds him, he said, of a program the Soviet Union once had in place to record sample typewriter printouts in hopes of tracking the origins of underground, self-published literature.

"It's disturbing that something on this scale, with so many privacy implications, happened with such a tiny amount of publicity," Schoen said.

And it's not as if the information is encrypted in a highly secure fashion, Schoen said. The EFF spent months collecting samples from printers around the world and then handed them off to an intern, who came back with the results in about a week.

"We were able to break this code very rapidly," Schoen said.