

For Immediate Release

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## Medical Researchers Tap Xerox “Text Mining” Tool to Curb Hospital-Acquired Infections

Researchers Use Xerox Language Technology to Analyze Patient Records, Improve Quality of Healthcare in Hospitals

GRENOBLE, France, March 25, 2010 – Each year, hospital -acquired infections (HAIs) affect millions of patients around the world, killing hundreds of thousands. While doctors and nurses have stepped-up hand washing and other methods to curtail infection, linguists at Xerox Corporation (NYSE: XRX) have teamed up with medical researchers in France to explore how “language technology” can help. During a three-year project, researchers will use an advanced “text mining” tool developed by Xerox to analyze medical records, automatically identifying patients who could be at risk of contracting an HAI.

The project, titled Assistant de Lutte Automatisée et de Détection des Infections (ALADIN), is being sponsored by the French government in an effort to help detect HAIs more quickly and reduce infections.

The ALADIN team will use FactSpotter, a technology developed at the Xerox Research Centre Europe, in France, to review medical records and identify specific terms and sequences of facts that indicate a patient may have contracted an HAI. The software not only pinpoints meaningful pieces of information, such as patient symptoms, drugs and names of bacteria but also how they are linked to each other. When these links identify potential risk of an HAI, the system automatically alerts the staff, so preventative measures can be taken.

“HAI infections are complex and can have many different causes. They may be the direct result of the type of care or completely independent of it but linked to a patient’s illness or condition,” said Dr. Marie-Hélène Metzger, medical lead on the project. “Linguistic technology plays a vital role in extracting the information required to correctly judge the situation and make the right decision. That’s what this project is all about.”

According to the Centers for Disease Control, hospital-acquired infections in the U.S. result in an estimated 1.7 million infections and as many as 99,000 deaths each year. The annual cost is pegged at \$45 billion. In France alone it is estimated that 4,000 HAI related deaths occur each year and that a third of these could have been prevented.

“Every patient is different, which makes it impossible to capture every piece of relevant information in a checklist or form,” said Frédérique Segond, principal



scientist at the Xerox Research Centre Europe and coordinator of the project. "Using our advanced text mining technology to analyze entire patient records, we can extract information specific to each case to help doctors evaluate the patient risk and quickly take the right action."

The project brings together a range of unique competencies in the fields of natural language processing, terminology, knowledge representation, epidemiological surveillance, medicine and care associated infections. Technology experts come from Xerox's Research Centre Europe, CISMef: the Catalog and Index of French-language Health Internet resources; Vidal -the French equivalent of the Physician's Desk Reference; and the research team in public health and epidemiology from Université Claude Bernard – Centre National de Recherche Scientifique UMR 5558 in Lyons.

ALADIN is a three-year project sponsored by the French National Research Agency (ANRT) TecSan program, which is designed to promote applications in innovative health technologies. The program is aligned with the European Union strategy to improve patient safety and reduce healthcare costs.

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**Note:** To see a video of Dr. Segond talking about the project and for more information on Xerox, visit <http://www.xerox.com> or <http://www.xerox.com/news>. For open commentary, industry perspectives and views from events visit <http://twitter.com/xeroxcorp>, <http://twitter.com/xeroxevents>, <http://www.xerox.com/blogs> or <http://www.xerox.com/podcasts>.

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