

## **WSU'S Genophiler System: A New Way To Analyze DNA**

*By Jessica Garringer*

Throughout the past year, three faculty members from WSU have created an advanced program for DNA analysis known as the Genophiler system.

"The Genophiler is a system for making DNA evidence clear and understandable to defense attorneys, or attorneys in general, who are involved with cases that include DNA evidence," said Assistant Professor Dr. Michael Raymer of the computer science department.

Raymer, along with his colleague Dr. Travis Doom, work primarily on the computational research and development. They focus largely on the automation aspects of the project and create algorithms and techniques to create an easier explanation for DNA analysis.

Dr. Dan Krane, an associate professor for the biological science department, focuses on the other aspect of the project, the biological side. "Dan understands what needs to be done to make the system understandable, yet accurate," said Raymer.

Along with the faculty, WSU's master's student Jason Gilder is also working with the system. "He really did all the hands-on work for developing the system. He's the guy that implemented and runs the software," said Doom.

One of the main goals of the Genophiler system is to "take the electronic evidence which is generated in forensic labs and subject that evidence to an automated and objective series of steps that produce a report that is readable to lawyers, humans and people that want to interpret that evidence. It will also point out any problems with the analysis that's done by the forensic lab," said Doom.

Along with being much less time consuming, the Genophiler is also drastically less expensive to use. Usually, to have DNA evidence analyzed by an expert would take anywhere from eight to ten hours and cost around \$18,000. With the new Genophiler system, evidence can be analyzed within three hours and cost \$1,000 per case. "Rather than focusing on money, we are just trying to get our hands on as many cases as possible," said Raymer.

"Forensic Bioinformatic Services (FBS)," the company created by the three faculty members, "is the first company that is fully developed based on technology that was designed by WSU faculty members. It is actually the university first technology commercialization," said Doom.

Currently, the Genophiler system has been used in 15-25 court cases. In the future, FBS plans to run numerous court cases on several separate computers, so that they can give as many cases as possible an objective view of the DNA analysis.

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