

# An interactive method for analyzing and reviewing results from a software expert system

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## Technology description

### The Technology

Researchers at The University of Tennessee have developed an advanced expert system based software program called STRESP that can aid an analyst to interactively review the results in the process of determining the DNA profiles that correspond to evidentiary samples. The system is designed to be integrated into the workflow of any forensics laboratory that processes evidence and other samples to obtain DNA profiles. The STRESP software implements a method that causes the expert system to re-evaluate only those portions of its rule base that could result in different observations or determinations from its previously found observations when these possibly different observations or determinations are caused by the examiner's rejection or editing of an observation or conclusion made by the software. The software maintains and updates information related to the dependencies of various observations and other data objects within the software in order to perform this selective update. The software also has a To Do List (TDL) displaying all the items that the analyst should inspect or review to make a decision. Another feature is an Interactive Call Sheet which summarizes the results of the expert system, and automatically updates in response to the review actions taken by the analyst.

## Advantages

- Enhances productivity of examiner/analyst.
- Supports both analyst and reviewer.
- Improves efficiency with which DNA profiles can be reliably determined
- Easy integration into the workflow of any forensics laboratory that processes evidence and other samples to obtain DNA profiles.
- Updates observations in highly efficient manner.

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