

# Greater than zero

## How a Boeing-developed software application is boosting info security

By Ron Glowen

The word “cipher” means zero, and a Boeing-developed software application called CIPHER is designed to “zero out” information within electronic documents that is hidden from normal viewing.

CIPHER, which stands for Categorize, Identify and Programmatically extract Hidden Entities and Resolve, examines electronic documents, e-mails, attachments and media files for possible incidents of hidden information. If CIPHER finds such data, it provides warning messages and a method for resolution using the software. The application is strengthening measures Boeing and even some external entities are taking to ensure the safeguarding of sensitive information.

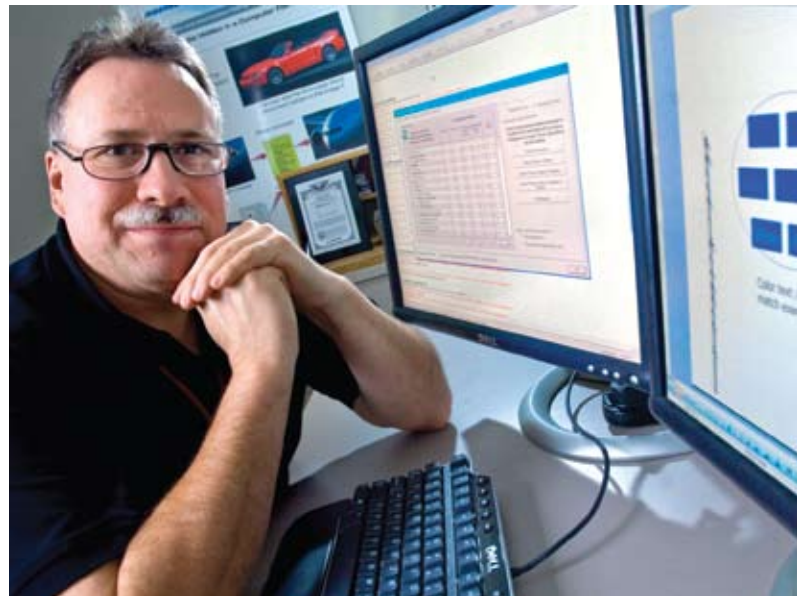
“CIPHER is a phenomenal technical achievement, and has proved to be a valuable tool for protecting International Traffic in Arms Regulations-controlled technical data and embedded classified Boeing information,” said Sharon Gilmartin, manager of Export Administration for Integrated Defense Systems’ Airborne Early Warning and Control (AEW&C) program.

The application was developed by a team of IT specialists led by Greg Smith, a Boeing Technical Fellow in Information Technology. Their aim: To alleviate serious concerns that proprietary or classified information could be accessed when objects (e.g., Microsoft Office software documents) are copied into another document. That’s because these embedded objects may contain multiple worksheets, slides or pages that are hidden from view, or text placed in a location not viewed under normal use. Such entities include document properties, reviewer comments, notes, revisions, and inserted or deleted information.

“CIPHER provides users with the tools they need to ensure that information is not hiding within the documentation they create,” said Smith.

The CIPHER tool can be used for a number of important business processes, such as:

- **Trusted Download:** When classified material is downgraded for removal from classified areas.
- **Hidden Information Identification:** For uncovering export-sensitive or personally identifiable information in documents released for dissemination.
- **Seek and Protect:** For identifying inappropriate information stored on a public server share.
- **Third Party Security:** For scanning documents entering the company, such as proposals.



In addition, CIPHER ensures that communications in a network-centric environment do not become a channel for malicious information or subversive activities.

To help keep information assurance a competitive advantage for Boeing, CIPHER is being used to support company policies and procedures for information security. Boeing employees can download it from <http://cipherware.web.boeing.com> on the Boeing intranet. CIPHER is also offered outside of Boeing and is serving entities from U.S. defense and security agencies to Fortune 500 companies such as Lockheed Martin and Raytheon. As a result, the application is generating significant revenue for Boeing through sales and licensing agreements.

In 2008, CIPHER application received U.S. Patent approval for the application concepts and algorithms, and a European patent approval is pending. CIPHER also received a prestigious Info-World 100 Award for being an innovative project that makes the best use of technology in pursuit of business goals.

“CIPHER is a prime example of innovation that enhances Boeing’s growth and productivity through technical and functional excellence,” said Federico Genoese-Zerbi, Boeing Information Technology vice president of IT Business Partners. “We are proud of Greg Smith and his team’s dedication and service, and the recognition they have received on behalf of Boeing.” ■

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**PHOTO:** Greg Smith led a Boeing team that developed CIPHER, a software program that’s helping the company and its partners protect sensitive information. **MARIAN LOCKHART/BOEING**