SaTC: CORE: Medium: Collaborative:

Cryptographic Provenance for Digital Publishing

Challenge

How can we increase digital information integrity to secure digital publishing and improve trust?

Solution

A usable system for integrating cryptographic signatures into digital media publishing, and effectively conveying the unique transparency and accountability properties of this content.

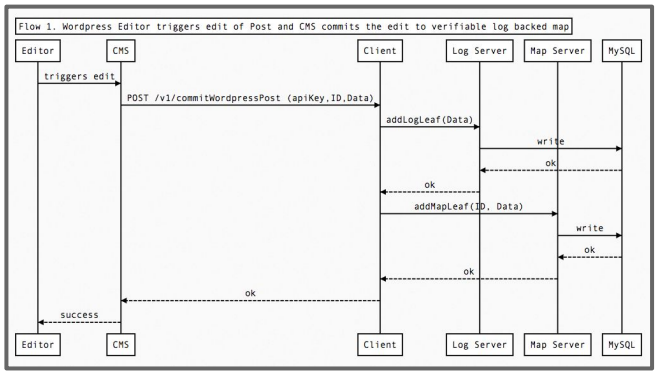

Fig. 1: Flowchart of the cryptographic provenance tool prototype's integration with the WordPress CMS

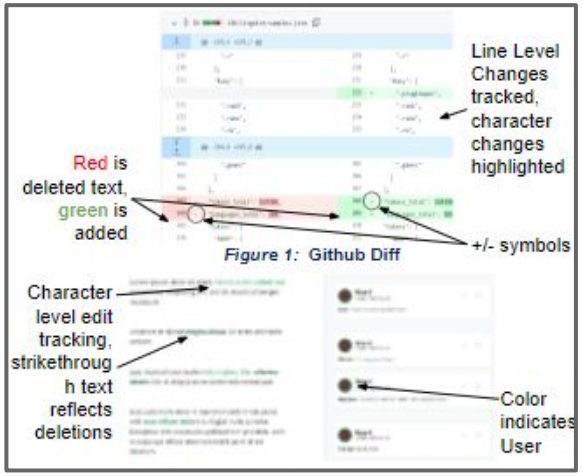

Fig. 2: Existing approaches to convey text changes

Scientific Impact

The project will demonstrate the practicality of news provenance as an important new application for cryptographic transparency techniques. This may help combat misinformation by securing and making more usable/available the history of online content.

Broader Participation

We successfully recruited a diverse group of students, including an African American Ph.D. student and three female REUs (two African American women and one Asian American woman).

REU students Eve Washington and Ayana Monroe, and PhD student Errol Francis II.

Principal Investigators:
Kelly Caine (caine@clemson.edu/CNS-1940679)
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Project Name

Optionally, one university or project logo may go in this space. Delete this box!

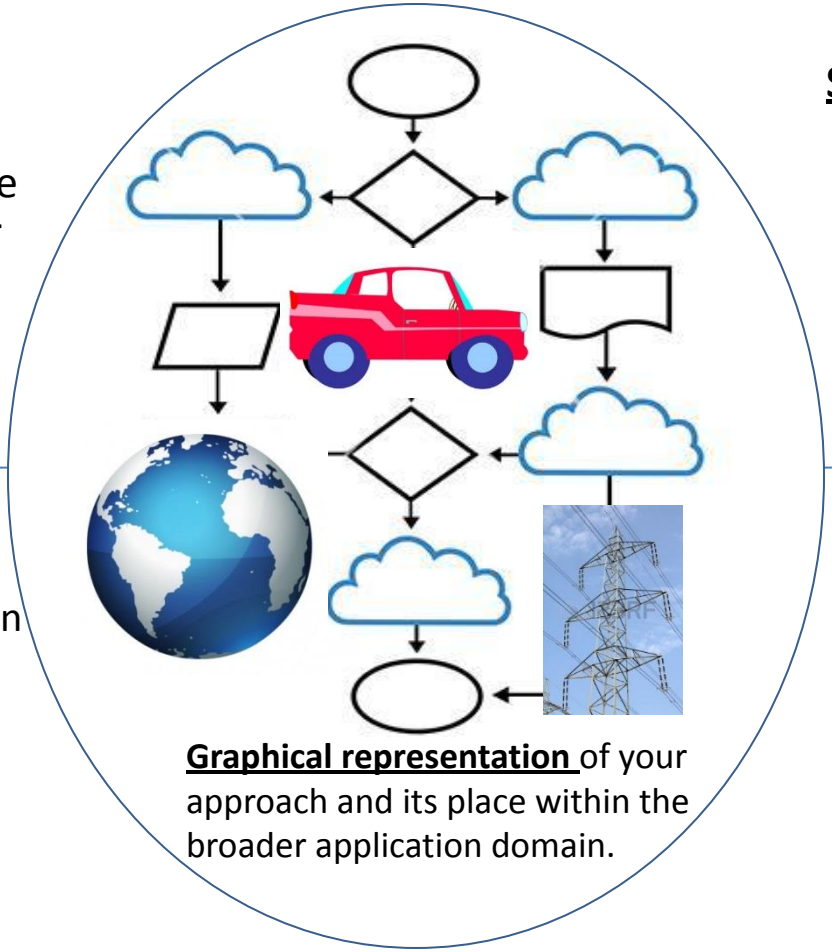
Challenge:

- Key problem(s) to be addressed and their significance.

Solution:

- Technical approach, in brief
- Highlight *key innovations* (new contributions)

Project info (number, institution, contacts,...)



Graphical representation of your approach and its place within the broader application domain.

Scientific Impact:

- How might the project contribute to solutions to security/privacy problems?
- How might the project improve the research community's understanding of security or privacy

Broader Impact and Broader Participation:

- What is the impact on society? Who will care?
- Possible transition to practice?
- Education and Outreach
- Quantify impacts if possible