CHORUS FORUM:

Trust and Integrity - Threats and Opportunities

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About STM

As the International Association of Scientific, Technical & Medical Publishers, STM advances trusted research for the benefit of society. We do this by fostering collaboration and innovation among our members and the wider scholarly community. Our work is centered on four key strategic areas of activity: Research Integrity, Social Responsibility, Open Research, and Standards & Technology.

160+ members

Academic publishers focused on science, technology, medicine, social sciences, and humanities

~60% of papers

Our members collectively publish 60% of all English language papers

20+ countries

STM spans the globe — made up of publishers of all shapes and sizes

Challenges to Trust in Science

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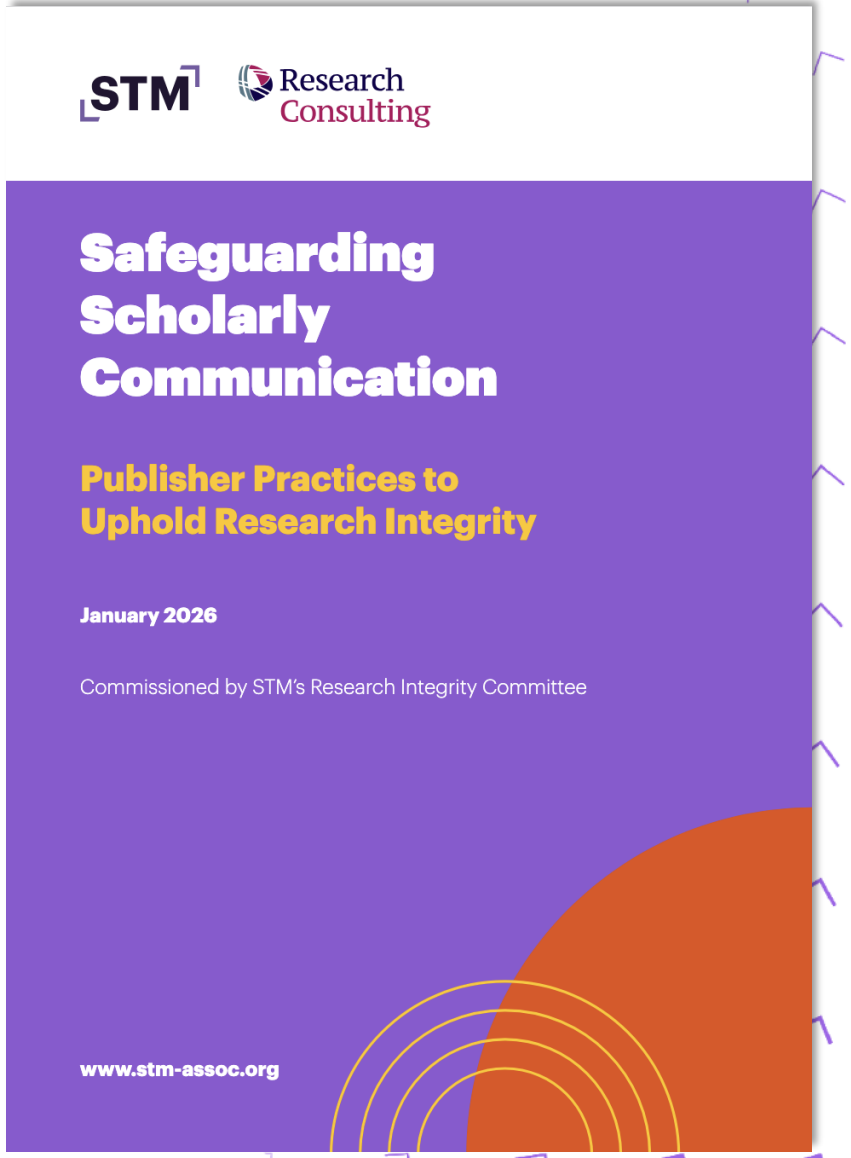
- Pressure to publish can lead people to cut corners or even engage in misconduct
- New technologies are making it increasingly easy to fabricate research data and papers

How have publishers responded?

- Dedicated integrity teams
- Advanced screening technologies
- Shared cross-industry infrastructures such as the STM Integrity Hub, COPE, and United2Act.



Why is this (probably) not enough

- GenAI makes it extremely easy to fabricate all types of research objects, including text and images
- Detection is expected to remain very challenging and often insufficient

We need to move ‘beyond the manuscript’

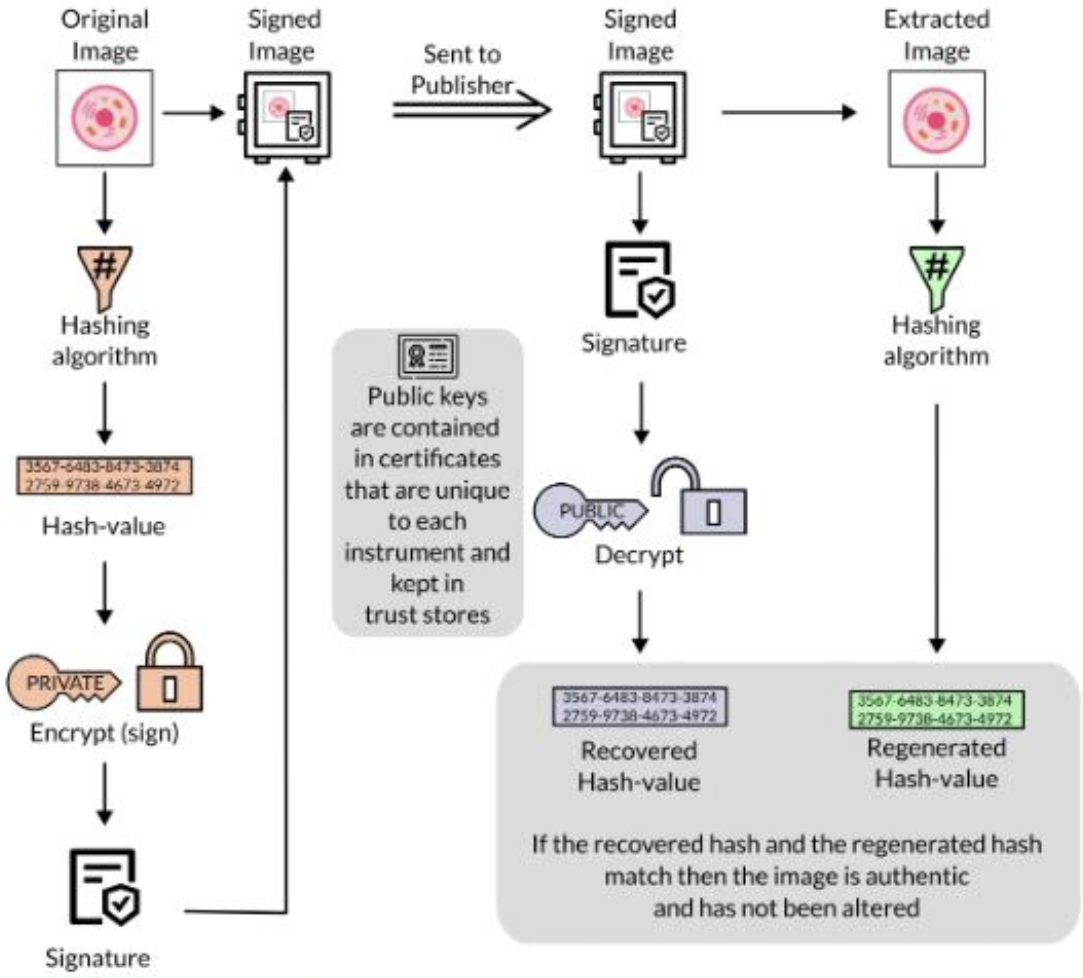
We need to move **beyond the manuscript** to validate research findings:

Beyond publishers **checking whether something is wrong**, we need to focus on solutions that **demonstrate the validity** of submitted research.

This requires changes **across the research ecosystem**, with all stakeholders participating.

stm-assoc.org/new-report-feasibility-of-technical-solutions-for-the-detection-of-falsified-images-in-research/

Public cryptography for image integrity

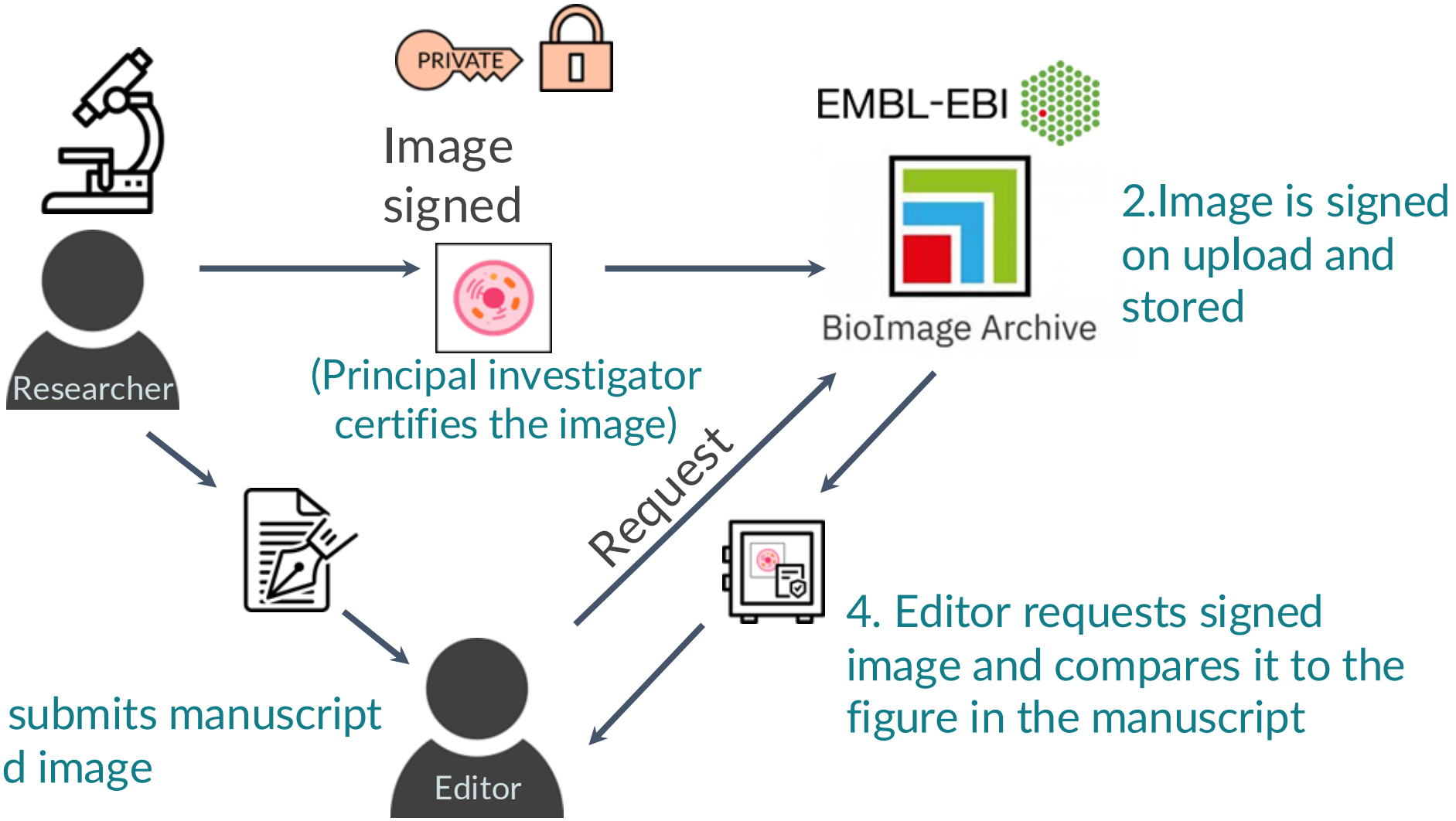


1. The image is reduced to a hash-value
2. The hash-value is encrypted using a private key embedded in the software on the instrument
3. Separate software can be used to…
   - Regenerate a hash-value in the same way
   - Recover the hash-value using the public key
   - Check that the regenerated and recovered keys match

STM

MOREBRAINS

We are preparing a pilot



Thank you!

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