



## THE POWER OF PROOF

### AbsoluteProof from Surety:

- Digitally “seals” electronic content, safeguarding intellectual property
- Guarantees trustworthy records and content
- Enables legally defensible proof of authenticity and ownership
- Delivers long-lasting content integrity protection
- Enables flexible workflow processes, completely transparent to users
- Mitigates risk and provides proof of compliance.

# Proving ‘First-to-Invent’ Status in Lab Informatics Systems Using Digital Time-stamp Technology

*Q&A with Chaka Benson, Bioinformatics, Ansaris, Inc.*

## Protect IP and Streamline “Signing and Witnessing” Process

As a division of Locus Pharmaceuticals, a drug discovery and development biotechnology company founded in 2000, Ansaris was formed to leverage the strengths and fully realize the value of Locus' drug discovery computational platform and its 10 years' experience in integrated drug design, discovery, and development of novel targets. Ansaris establishes collaborations and partnerships with companies seeking innovative solutions to drug design challenges.



*Q: What were your primary data integrity protection requirements?*

**A:** Properly maintained laboratory notebooks also ensure that the research record is in a legally acceptable evidentiary form should Ansaris need to assert or defend its patent rights to a particular invention - essentially, to provide evidence of inventorship. In the United States, proof of “time of invention” is critical in protecting scientific intellectual assets. In the pharmaceutical industry these assets typically come in the form of “lab notebook” entries, and other electronically archived content. Prior to engaging with Surety, we required scientists to save experiments to DVD, and then have them physically signed, countersigned and witnessed. This process was labor-intensive and time consuming. We were informed by our legal counsel that approximately 20 percent of the industry has a purely electronic solution for archival, so our challenge was to design and implement a lab informatics solution that could satisfy the requirements of proving inventorship.

*Q: Tell us more about the process you used to find a solution that could meet these requirements.*

**A:** We were aware of the issue that merely using system, or machine, time to provide proof of “time of invention” would be insufficient. A system timestamp can easily be faked or overwritten. Our team investigated to see if there was an open standard relating to digital timestamps and authentication, and we came across a specification from the Internet Engineering Task Force (IETF).

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The IETF published [RFC 1361](#) detailing this process. It was since augmented and superseded by the ANSI standard "[ANSI ASC X9.95](#)". The highlights of these standards include:

- **Authenticity:** trusted, non-refutable time when data was digitally "signed;"
- **Integrity:** protection of the timestamp from undetected tampering;
- **Timeliness:** proof that the time of the digital signature was the actual time;
- **Evidentiary trail** of authenticity for legal sufficiency.



In essence, this strategy employs digital cryptography, with a token ("seal") issued by a trusted authority, which encapsulates a timestamp issued by the International Time Authority.

As we investigated further, we became aware that there were a number of vendors in this space, and decided to take a closer look at some of them to see if they could meet our requirements.

*Q: Why was Surety the answer for Ansaris? What features and qualities made the AbsoluteProof Data Integrity Protection Service most attractive to Ansaris?*

- A: The key features and qualities that drove our decision to select Surety as our archival vendor include:
- Full support for the **ANSI ASC X9.95 Trusted Timestamp** standard
  - The **AbsoluteProof Software Development Kit (SDK)**, capable of interfacing seamlessly with the timestamp functionality. We've implemented the Java SDK.
  - **Transaction-based pricing model**, rather than a service model with recurring fees and excess overhead. Essentially, this is based on the volume of "Seals" we transact.

With Surety's AbsoluteProof Software Development Kit, we have more flexibility to design our system to our custom requirements, and can produce a system that is more resilient to change.

*Q: How will Ansaris use AbsoluteProof? What do you expect to see in terms of results?*

- A: We've integrated a number of technologies to produce our solution. Using our electronic notebook as an entry point, we simply have scientists export their experiments as a Microsoft Word document to a well-known location on the network. A background process sees the new or changed document, "seals" the document, and sends an email notification to that scientists' assigned witness. The sealed document can then be "witnessed," merely by viewing the document and the details of its authenticity "seal" with the freely available AbsoluteProof Viewer, and copied to another well-known location to receive a second "seal" for the witness. The files are then sent to tape on a weekly basis and stored permanently off-site with our data retention vendor. At any time, the document can be "validated" literally by anyone simply using the AbsoluteProof Viewer.

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*Q: How does Ansaris' value proposition change with the integration of AbsoluteProof?*

A: AbsoluteProof provides Ansaris and its collaboration partners with greater confidence that confidential and sensitive information and data can and will remain secure with minimal time commitment from our scientists.

*Q: Is there anything further you want to add?*

- A: With the flexibility of the Surety SDK, we have been able to integrate with a number of systems and protocols to provide a complete solution.
- Our solution is tied in to an Oracle relational database to track scientists, witnesses, and authentication details along with an audit trail of what documents were signed when and by whom.
  - Automated emails are sent to witnesses and management to ensure:
    - Experiments do not go "un-witnessed" for more than 14 days;
    - Scientists do not have experiments "open" for more than 30 days.
  - Reports are generated to our wiki to inform each scientist of any outstanding commitments to witness or experiments to close.

Overall we have realized cost savings on this project, as it takes significantly less time to archive an experiment, and is not as intrusive to a scientist's normal workflow. In the old scenario there were approximately 15 scientists spending between 5-10 hours per month supporting this process. We were able to reduce this down to roughly one hour per month, and eliminate the need for a dedicated person to create the DVDs and shepherd the process.

#### About AbsoluteProof Digital Time-stamp Service

With millions of electronic records and files worldwide "sealed" by its service, Surety is a leading provider of data integrity protection solutions. Surety's AbsoluteProof trusted, digital time-stamp service can mitigate risk, create significant business value, and defend the integrity and authenticity of electronic records and other valuable digital content.

AbsoluteProof ensures against content tampering by providing a "digital wax seal" for all types of electronically stored content. Backed by a legal defensibility guarantee, AbsoluteProof ensures that electronic records, files, documents and other digital content sealed using the AbsoluteProof service will withstand the toughest legal scrutiny.

To learn more about how Surety's AbsoluteProof trusted time-stamp service can help you protect the integrity and legally defend the authenticity of your digital assets, visit [www.surety.com](http://www.surety.com).



*Think of us as the modern-day "Digital Wax Seal"*

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