

Synthetic DNA Could Soon Be Used to Thwart Art Fraud

Noémie Jennifer — Oct 27 2015



Eric Fischl, Art Fair: Booth #22, Evil Live, 2013, Oil on Linen, 68 x 82 inches. Courtesy Eric Fischl Studio.

As early as next year, works of art by [Chuck Close](#), [Eric Fischl](#), [Mickalene Thomas](#) and other leading contemporary artists will receive individual,

encrypted DNA labels. The technology is being developed as part of the [i2M Standards](#) initiative of the Global Center of Innovation at the University at Albany, where a large crew of scientists, academics, curators, conservators, artists, lawyers and insurance specialists are collaborating to establish new standards of authentication.

“This is not the kind of DNA people are used to hearing about,” explains Martin Tenniswood, the molecular biologist who came up with the methodology for the labels. “These are short sequences of synthetic DNA; it has nothing to do with the artist’s DNA. We’ve come up with a microfluidic system: A sticker with tiny wells containing DNA samples is adhered to the back of the artwork. We know what the DNA sequences are—no one else does. We can then go in and, using tiny volumes of fluid, extract the DNA from one of the wells and confirm that those are the sequences we originally put in that well. It’s like hiding four specific grains of sand on a huge flat surface covered in sand: You’re hiding the tag in plain sight, but unless you know exactly what you’re looking for, you won’t find it.”

DNA cryptography was chosen because it’s virtually unbreakable, but also because there is already a long history of jurisprudence involving DNA. Tagging paintings will be useless unless it’s accepted by insurance companies and the legal system. “It’s not just about technology—it’s about how technology is verified,” says Sam Salman of NRS Associates, the company that helped establish the Global Center of Innovation, with support from ARIS Title Insurance Corporation. “How does one go about developing standards? We picked the academic model, which requires peer review. Whatever a researcher suggests has to be scrutinized, and scrutinized somewhat skeptically. So we selected an academic environment to house the Center. The purpose is to encourage innovators and stakeholders in the art market to agree on some basic principles that fit and enhance their own businesses.”



Mickalene Thomas, She Ain't a Child No More #2, 2015. Rhinestones, acrylic, oil and enamel on wood panel. 96 x 120 inches; 243.8 x 304.8 cm. Courtesy of the artist, Lehmann Maupin, New York and Hong Kong and Artists Rights Society (ARS), New York.

Approximately 40 living artists have signed on for the first phase of the initiative. The labels' encryption key will link to detailed information about the creation of the work, and moving forward, every time the piece changes hands, it will go through a validation process so that provenance details are carefully recorded and tracked. Any gaps in ownership history or evidence of tampering with the label will easily be flagged. "It will help any financial stakeholder to be able to prevent criminal financing, theft, fraud—all of the things that happen quite often," says Salman.

Subsequent phases of the project will involve working with galleries to tag existing pieces with a very clear provenance, as well as developing stickers that can adhere to different mediums unobtrusively. The current label is designed to stick to the back of paintings, but custom tags will later be developed to fit the curvature of sculptures, for example, or be woven into tapestries with nanofibers. “That’s a few years down the road,” says Tenniswood. “Tier 1 is going to keep us busy because the artists who are first adopters are extraordinarily productive.”

To learn more about i2M Standards, [click here](#).

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