



**Expanse Labs improves digital authentication.** Our system uses an analog process based on physical tokens to reliably authenticate users. In addition to traditional authentication, it can operate anonymously as a CAPTCHA system. The tokens are typically cards but can use other form factors such as passports.

The advantages of our system include: improved user experience, resistance to AI attack, higher conversion rates, lower false positives/negatives, ease of adoption, reduced cultural barriers, and giving enterprises greater control over their own systems.

Our playing card-based tokens feature large, disability-friendly text on the front and a QR code on the back. To validate it anonymously, the suit, number, and alphanumeric characters from two cards are entered into a prompt. A server then verifies they are valid cards from the same deck. This proves the request comes from a human without having to know who it is.

A specific registered user can be validated in much the same way using a single card from the registered deck since the server knows which deck to check.

Cards also have a machine-readable side with a QR code. This speeds up the process for users with a camera on the input device. The ability to scan cards is especially useful for disabled users who often struggle with current CAPTCHA systems.

Adoption is simple and low cost. This allows enterprises to have control of the system and avoid paying third party fees. Contact us for purchasing and licensing options.