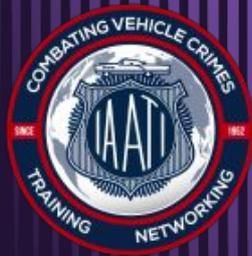


Regula

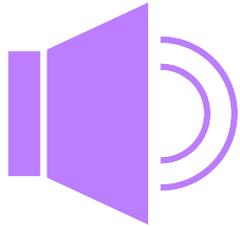


See the Unseen:

Inside the Real World
of Document Fraud



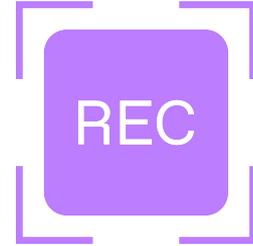
Housekeeping



Trouble with audio?
Try dialing in!



Submit your questions
in the Q&A section



We're recording!
We'll email you the link



Name/Surname

Wendell Takata

Business role

Committee Chair
at IAATI



Name/Surname

Andrei Dumski

Business role

Principal Forensic
Expert at Regula

Where Verification Fails in Practice

Based on your experience, where does fraud most often bypass controls?

Where traditional methods break

Security feature present

~~=~~

Security feature genuine

Data format

~~=~~

Data logic

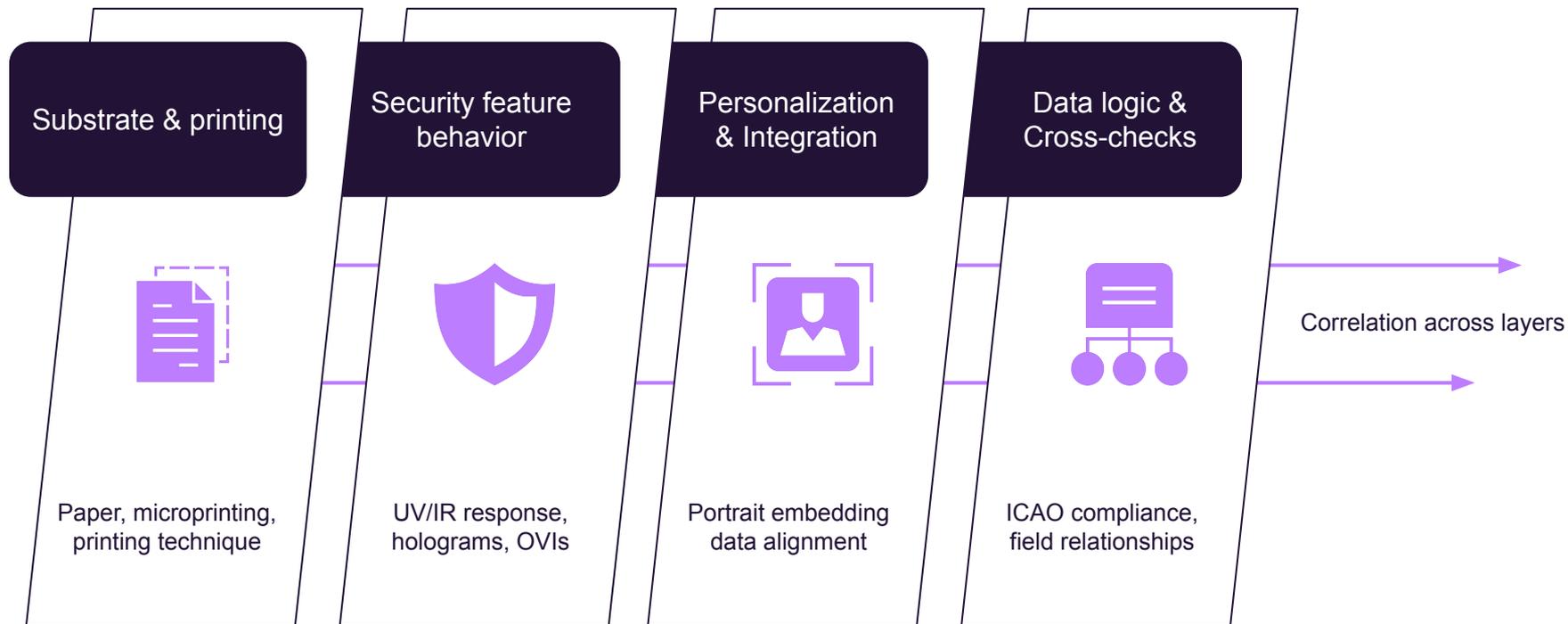
Visual similarity

~~=~~

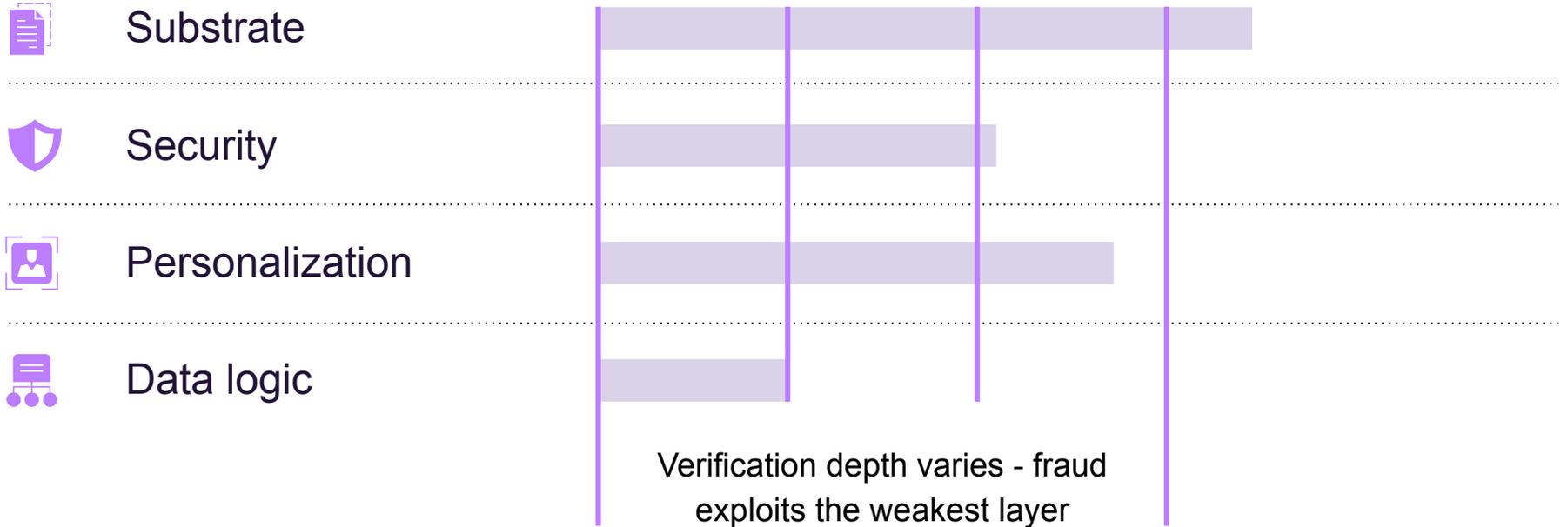
Structural consistency

Forensic Authentication Model

Layer behavior, not layer presence



Typical failure patterns



Modern fraud types in practice

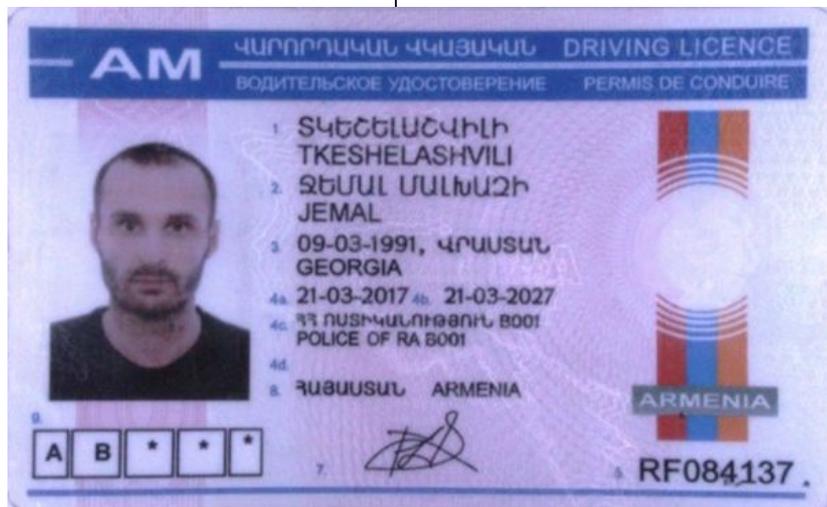
- 1 **Counterfeits** – an unauthorized reproduction of a genuine document
- 2 **Forgeries** – alteration of a genuine document
- 3 **Pseudo documents** – documents which are not officially recognized



Counterfeits

Physical reproduction fraud

What makes it convincing



- Advanced material replication
- Replicated security features
- Data structure accuracy
- Valid document structure

Forgery

Manipulation of genuine documents

What makes it convincing



- Real security features
- Correct material & substrate
- Real manufacturing base
- Sophisticated Tampering Methods
- Chip Tampering

Technical manipulation

Encoded data attacks

What makes it convincing



- Subtle, Non-Visual Changes
- Leveraging Trusted Formats
- Logical Consistency
- Bypassing Checksums

20-second triage: first priority



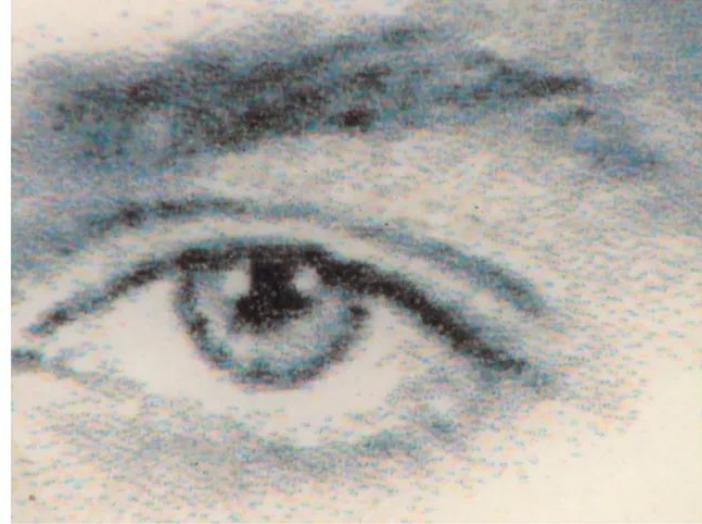
If you had **20 seconds**, what would you check first?



Case Study ID Docs



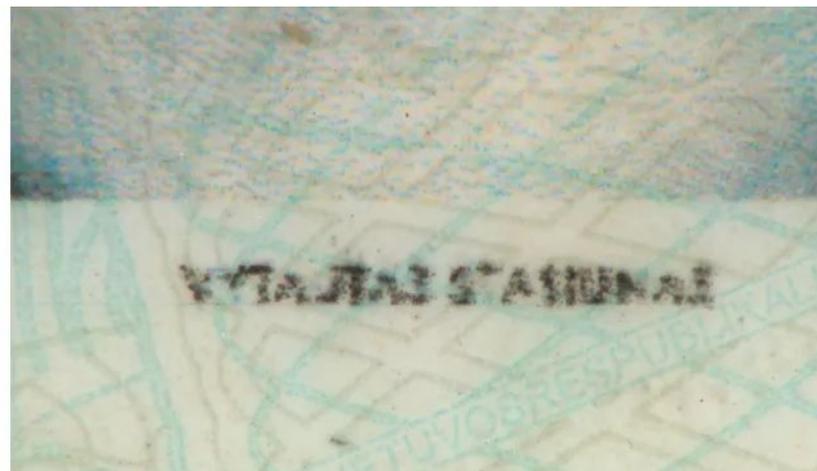
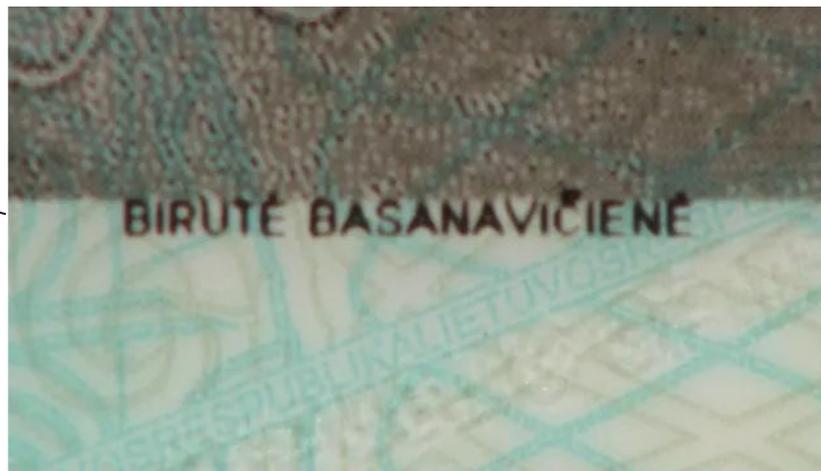
Magnification (portrait)



The obvious difference between laser engraving (left) and inkjet printing (right) under 40x magnification. Inkjet printing can be distinguished by its color dots. Images were captured with the Regula 4308 video spectral comparator.



Microtext examination



The microtext imitated with an inkjet printer (right) under 40x magnification. Also, the forged microtext is slightly displaced relative to the authentic microtext (left).

Correlation summary



White light → no obvious issue



UV → substrate anomaly



IR → ink inconsistency

40x → inkjet portrait

Microtext → displacement

Why this was not obvious

- All overt features were present
- Visual inspection showed no anomalies
- No immediate contradiction within a single layer
- The inconsistency appeared only in cross-layer correlation

2

Case Study
Autodocs

How this looks in vehicle crime cases

- 1 Altered registration certificates
- 2 VIN substitution patterns
- 3 Title washing across states
- 4 Re-registration in another jurisdiction



What would have happened if this passed?



If Accepted, This Document Would Enable:

- Account access or onboarding
- Cross-border travel
- Identity-based transactions
- Database propagation
- Secondary identity reuse



When the object has an identity

Physical Vehicle

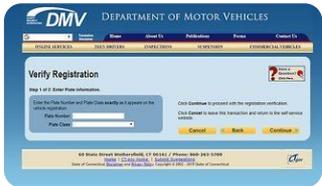
- VIN stamping
- VIN plate



Registration Certificate



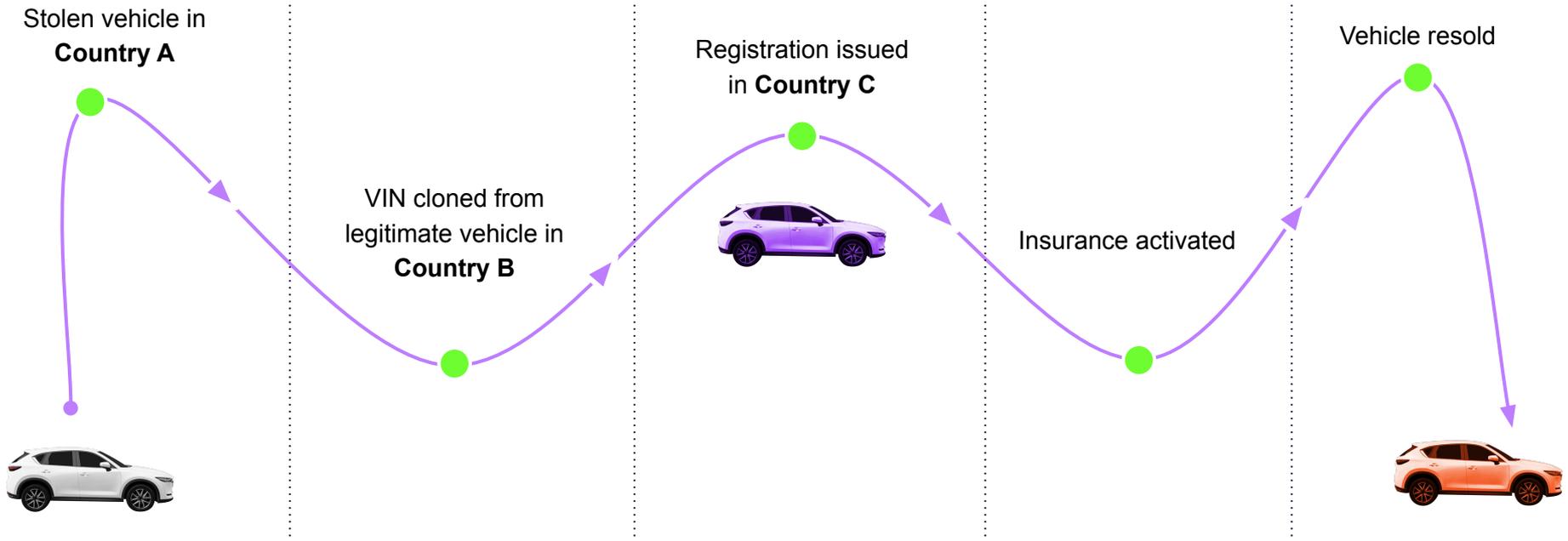
National Registry Record



National Registry Record



Cross-border vehicle identity laundering

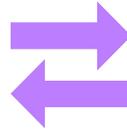


Where the fraud actually happens

Physical reality



- Physical VIN altered
- Original identity lost



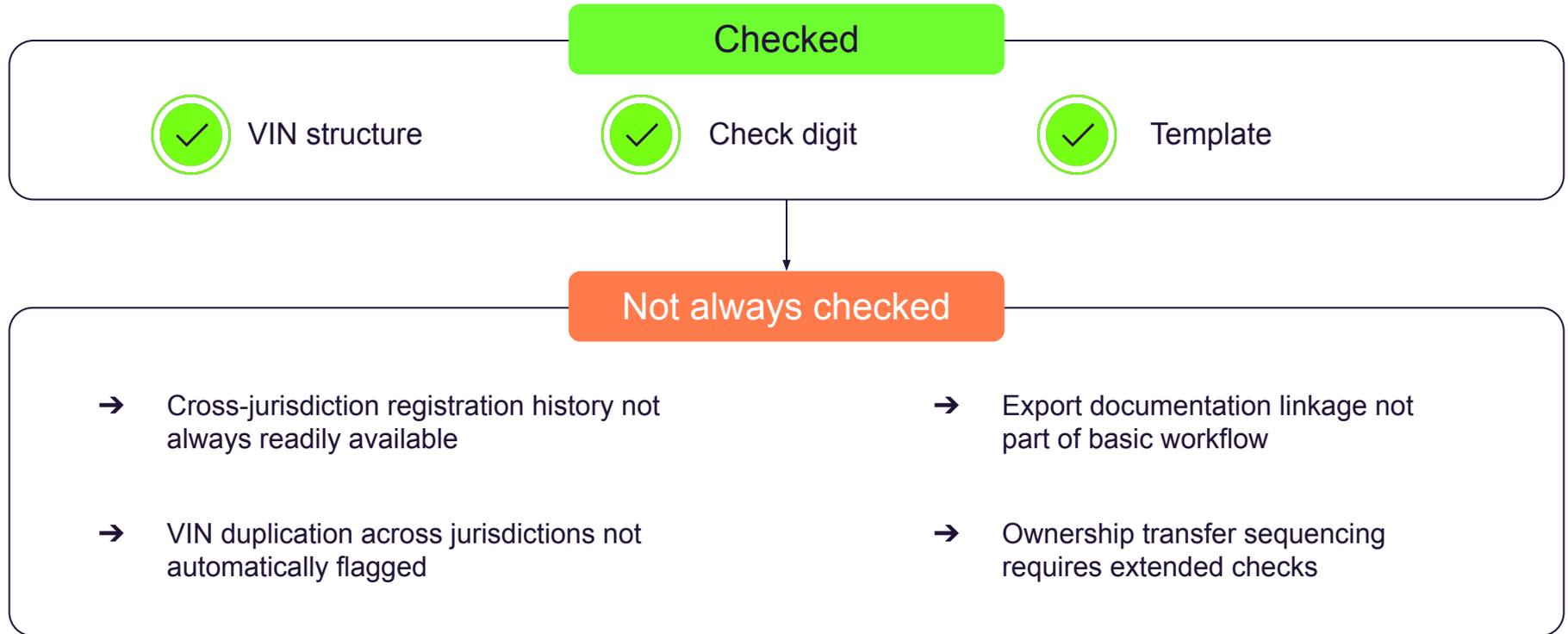
No cross-layer
correlation

System reality



- VIN structure valid
- Check digit correct
- Registration accepted

Why it was not detected in practice



What It Takes to See the Unseen

Layered verification is not optional

1

Never validate identity in a single dimension

Correlate physical reality, documentation, and system data

2

3

Analyze relationships, not isolated fields

Examine sequence, not only current status

4

Operational expertise behind the approach

- 34+ years of forensic document examination expertise
- 16,000+ identity document templates from 254 countries and territories - the most comprehensive library in the world
- Long-term cooperation with international law enforcement organizations, including INTERPOL
- Professional training programs for investigators and document examiners
- 100% in-house R&D
- Used at 80+ borders worldwide and the world's major banks

Questions?

Regula



Thank you!