Agenda

- Antitrust statement
- Initiative background
- Strategy signposts
- Proposed solution
- Observations on age verification
- Existing solution market overview
- Why NACS?
- Technology design; principles, architecture, demonstration, key timeline
- Next steps
- Q&A
Antitrust Statement
Alan Thiemann, of Counsel to Conexxus
Today’s Presenters

**Manu Sporny** is a five time entrepreneur, a Founder & CEO of Digital Bazaar, & a innovator, past chairman & current specification Editor for a variety of Working Groups at the World Wide Web Consortium (W3C). He has co-invented a variety of technology stacks such as JSON-LD, Linked Data Security, Verifiable Credentials, Decentralized Identifiers, some of which are used by hundreds of millions of sites on the Web. [https://digitalbazaar.com/](https://digitalbazaar.com/)

**Gray Taylor** is Executive Director for Conexxus & Technology Consultant to NACS, where he is leading the NACS Age Verification Initiative. He has 40 years of industry experience as a retailer, systems vendor & industry advocate. He has held executive positions at 3 global petroleum systems providers & was VP of Technology & Research at NACS. [https://www.conexxus.org/](https://www.conexxus.org/)

**David Ezell** is the Director of New Innovations at Conexxus. He is an experienced Software Architect in Point of Sale & Financial Services, holding senior positions at Verifone & Bennett. Innovative & influential in creating & implementing new software designs based on emerging technologies. A proven leader in software industry standards development & incorporation of standards in technical platforms. [https://www.conexxus.org/](https://www.conexxus.org/)
Age-Restricted Retail by Segment - 339,300 total

- Convenience: 153,000
- Liquor: 34,000
- Grocery: 38,000
- Bars/Restaurants: 67,000
- Vape: 34,000
- Tobacco Outlets: 9,000
- Cannabis: 4,300

Why bullet-proof verification of age is required for age-restricted products in the convenience stores:

- More than half of all dollar sales is generated from an age-restricted product (51%).
- 27% of all unit sales is generated from an age-restricted product.
- 57% of all transactions include age-restricted products.

Age-restricted products drive trips and baskets:

- Age-restricted baskets contain fewer total items, averaging 1.8 units per transaction.
- Transactions with age-restricted products average $2.85 higher.
- Age-restricted products generated more than $2.49 in 2019, up 3.0% versus prior year.
- More than 20% of all age-restricted items are sold between 3 and 5 pm.

31.2% of total US Sales

Total US Age Restricted Sales $474.2B
($ billions 2018)

Total Industry Age Restricted Sales $147.9B
($ billions 2018)

Source: NACS 2018 State of the Industry
Consumers agree there is a problem...

Three in five (61%) say that the issue of age-restricted items being sold to underage customers is “something that has always existed and is no worse than ever before”
- However, fully 25% say the topic is a “new or growing problem”

75% say in-store retailers are doing an “effective” job
- By contrast, 45% say online retailers are “effective”

Half say ‘second-hand sourcing’ is how youth get access
- The other half are ways we can better prevent (ex. checking or validating IDs)

Consumers want retailers to focus on alcohol, vape, tobacco (cigarettes)
- Vapes (66%) and cigarettes (61%) seen as “easy to obtain”
- 50% say alcohol is “easy to obtain”

…and we are empowered to find solutions

- 90% of Americans support a nationwide standard for age-verification (including 52% “strongly support”)
  - Solid across all demographics: age, gender, race, region, and parents

More than 4 in 5 (78%) consumers favor a mandatory / universal “We Card” style approach (i.e., manually (physically) checking IDs for ALL customers who make an age-restricted purchase)

Research-based messaging for convenience stores to embrace:
- A standardized process will be most effective when followed by all stores
- As responsible retailers, we support a standardized process that is required by law
- We are working alongside partners such as state DMVs, pharmacies / drug stores, and gov’t

We recognize it’s impossible to completely eradicate the problem of youth getting access, we are fighting for a stronger age verification process that will get us much closer to this goal
• The consumer is defining expectations:
  ➢ The consumer expects retail to keep ALL adult products out of youth hands through uniform age verification; this is an industry BRAND issue...
  ➢ The consumer understands the role of social sourcing in under-age use of adult products, & we should create solutions to this problem

• We sell legal products, responsibly, but we need improve our compliance to meet consumer expectations
  ➢ We need to retain existing category availability for our viability
  ➢ We need to establish our channel as the experts in responsible retail for future category availability
  ➢ We need to lead the way to greater consumer privacy & control in digital commerce
Proposed Solution - The Initiative

1. Publicly align industry stakeholders to mission, starting with tobacco/OTP
2. Create a standards-based & cost-effective system for age verification
3. Embrace consumer rights of privacy & emerging regulation
4. Publish standards & interfaces in the public domain, free to incorporate
5. Operate this system via transparent, “public benefit” entity
6. Minimize cost & tech debt through network economics & category expansion
7. Provide common infrastructure to:
   - Accommodate known regulatory needs,
   - Accommodate broad resale requirements of FMCGs
8. Lead innovation in digital identity migration – be the future
9. Advocate for stricter age verification enforcement; all products & channels
• Keeping age-restricted products from underage consumers requires societal approach – closing all opportunities
  ➢ All age-restricted products should be treated with equal gravity
  ➢ Every seller should adopt 100% verification; no leakage
• Verifying every customer of age-restricted products is essential
  ➢ This requires every seller to adopt 100% verification
  ➢ Without verification, there can be no tracking
  ➢ The ability to do so is available, but fragmented & cost prohibitive
  ➢ Verification will evolve to frictionless balanced against privacy
• The consumer must be vested in objective & supportive
  ➢ Benefits must exceed cost of inconvenience
  ➢ The consumer must not incur additional risk to identity
• Big Tech
  ➢ Technically able to easily provide service due to natural monopolies & scale
  ➢ Data flows required for real age compliance would put retailers at disadvantage; control of data
  ➢ Winner take all business model for consumer identity, toll for “rentback” of consumer identity

• Identity Service Providers
  ➢ Toll-based entities heavily vested in preserving paper ID
  ➢ Toll-based document to digital ID conversion services
  ➢ Winner take all, closed loop, digital identity ecosystems

• Government Agencies
  ➢ Fragmented authority; Federal, State, Military, Agency, etc.
  ➢ Lack of coordination & use-case consideration
  ➢ Need private buy-in for emerging digital IDs (we really want this)

• None offer neutral, unified public benefit model - balkanized
  ➢ Varying levels of verification; weak to overburdensome
  ➢ No ability to track “social purchasers” across retail
  ➢ No ability to provide systemic limits of purchase (Sudafed problem)
NACS & Affiliates as the Catalyst

• Knowledge
  ➢ Strong experience in age-restricted sales compliance, through advocacy & We Card affiliation
  ➢ Strong technology & standards expertise through Conexxus affiliation
  ➢ Strong data security & privacy expertise through advocacy & Conexxus
  ➢ Fiscally responsible governance of non-profit operations expertise

• Connections
  ➢ Trade association for leading channel of age-restricted consumer goods
  ➢ Existing engagement by all relevant stakeholders
  ➢ Unique ability to avoid antitrust concerns while providing industry solutions
  ➢ Decades-long active leadership in technology standards development (Worldwide Web Consortium)

• Advocacy
  ➢ Well-respected advocate in all levels of Federal governance
  ➢ Established network of state associations
  ➢ Active in all relevant standards bodies
Technology Design Principles

• Must be more frictionless & reliable than existing age verification
• Must work within common retailer technology stack
• Must operate in reality of retail operations
• Must not increase data security or privacy risk, today or tomorrow
• Distributed specification (POS) changes must be infrequent
• Operations & data flows must be consistent – standards
• Must be easy for tech vendors to incorporate - tools
• Must embrace emerging digital identity standards - lead
Project Release Plan – 1/21 Launch

• Marketing Phase 1, POS specification for contemplated operations
  • Technical Phase 1 (TPhase1):
    ➢ Standardized POS operations & dataflows for all phases
    ➢ Focus on standardizing DL consumption at POS
    ➢ Scalable & secure hosting system to tokenize, track, trace, limit & report
  • Technical Phase 2 (TPhase2):
    ➢ Mobile device operation with tokenized ID; “wallet” & supporting infrastructure
    ➢ Digital ID consumption to “calve” age token
    ➢ Open APIs for qualified boarding entities

• Marketing Phase 2 – extend system to online use cases
  ➢ Token consumption by third parties (digital promotion, loyalty programs, other “wallets”)
  ➢ Usage of emerging AAMVA mobile DL and Federal ID standards
Retail Operational Goals

• To minimize operational friction with consumers
• To support verification through existing “paper” documents
  • Driver’s licenses
  • Passports
  • Military & Tribal IDs
• To support offline operation
• Path of migration to digital identity future
Software Architecture Goals

- To leverage the speed & security of new identifier technologies
- To work “seamlessly” in merchant owned/operated communications stacks
- To leverage the newest standards in identifier technology
- To leverage “API Ecosystem Design Practice” using microservices to
  - Minimize software “churn” for POS vendors (cost & time to market)
  - Avoid departure from existing vendor programming practice
  - Allow functional upgrades without having future impact on the POS software
  - Provide a powerful test & certification environment (Conexxus API Initiative)
POS Operational Flows

DL Flow
- Scan license
- Clerk verify photo
- POS validate DL scan data
- POS calculates age from ID
- Get single use token
  - Online, or
  - Create local token
- Check open-to-buy
  - Online, or
  - Use pricebook settings
- Finalize purchase
  - Online, or
  - Store for later forwarding

“Non-DL” Flow
- **Enter manual data**
  - Clerk verify photo (if any)
- POS calculates age from ID
- Get single use token
  - Online, or
  - Create local token
- Check open-to-buy
  - Online, or
  - Use pricebook settings
- Finalize purchase
  - Online, or
  - Store for later forwarding

Tokenized Flow
- Scan single use token
- POS validates token
- POS obtains age from token
- Check open-to-buy
  - Online, or
  - Use pricebook settings
- Finalize purchase
  - Online, or
  - Store for later forwarding
PDF417 Data  \textit{OR}  Manual Data \textit{and} POS Data \textit{and} Purchase Data

- Doc type: Driver’s Lic.
- Issuing authority
- Document number
- Date of Birth
- Expiration Date
- Reason for override

- Doc type: “Passport”
- Document number
- Date of Birth (man.)

- Site Verification ID
- Cashier ID
- Calculated Age
- Local Store Time

- Array of
  - GTIN Code + Mod
  - Quantity

\begin{itemize}
  \item ID Proofing = (PDF417 Data or Manual Data) + POS Data
  \end{itemize}

\textit{Returns Single Use Token (SUT)}

\begin{itemize}
  \item Audit Reporting = SUT + [ Purchase Data ]
  \end{itemize}
POS Design Requirements

Mobile Token Flow Visualized

1. Age item in basket, customer opens wallet with biometric
2. Token rendered as QR code on mobile device
3. QR code presented to scanner, visual check by cashier on photo
   Can also be NFC
4. POS checks NACS signature, logs token, age bracket.
5. POS checks open to buy, finalizes purchase.
6. Local restrictions applied if needed, sale finalized

Audit server
Cloud Services Design Overview

Manu Sporny, Digital Bazaar
POS Implementation Guide
Point of Sale/Back Office
NACS Age Verification Project
June 17, 2020
Version 0.2 DRAFT

Document Summary
This guide provides details for a POS System Developer or Integrator to use in implementing changes to work with the NACS Age Verification System.

National Association of Convenience Stores

Age Verification

2020 Engineering Plan

Using global identity verification standards to ensure compliance with sale of age restricted goods.
Next Steps

• We want to work with the vendor community to establish the best age solution...
  • Engage in the Conexxus standards process approved by RBR last month.
  • The Project team would want to identify a PoC within each vendor to coordinate specification, support and feedback
  • We want to pilot a system this September. We are looking for an aggressive vendor to partner on this goal...
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• Thank you!