



Adding “trust” to NFC applications provides frictionless authentication Experience for New York City buildings

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More things connected increases the need for...Internet of “Trusted” Things

Evolution of Internet of Trusted Things

RFID Transponders



Cloud Data Analytics & Authentication

NFC



Mobile devices
iOS, MSFT, Android

IoT is not new



Real-Time & Sensing

Easier to deploy & Use

Smarter Building: Maintenance & Inspection



Manage



Monitor



Measure

Physically link equipment to maintenance management systems (CMMS) to receive relevant & historical data, arm mobile field technicians to be more efficient, and comply with city ordinances



New York City Embracing the IoT



Buildings across New York city are implementing a “trusted” IoT Ecosystem

Streamline fire protection & Inspection processes



Building High-Rise: Fire & Safety Implementation



- Key Building Challenges

1. Compliance with building, federal and local safety inspection regulations
2. Thousands of industrial equipment parts, on paper labels
3. Improve traceability of maintenance logs
4. Antiquated maintenance scheduling



Building Requirements: Industrial Sprinkler Equipment Systems



Mission: *Simplify and streamline maintenance & inspection process for industrial sprinkler equipment*

Deployment Technical Requirements:

1. Easy **integration** into various sprinkler equipment and **CMMS** software applications
2. Must be **mobile** environment for field workers
3. Digital “proof of **compliance**” and reporting for regulatory mandates
4. **Authenticate** the technician to the specific equipment that is being serviced
5. NFC tag application must be **flexible**, and **robust** to affix to the various equipment & conditions



The Solution: Trusted Automated Maintenance & Inspection



Trusted Tag NFC

1. Strong Authentication
2. Tamper Evident NFC Type 4 + Barcode



Automated Decision

1. CMMS
2. Mobile Process
3. Reporting



HID Cloud Authentication

1. HID Authentication
2. SaaS



Facilitates a secure, efficient transaction when technician taps their smartphone on the tagged sprinkler system



Trusted Outcomes



- **Peace of Mind:** Systems are compliant, maintained for integrity to avoid failure and receive swift attention in case of emergency
- **Digital Proof of Presence:**
 - Easy inspection process, reports online, automated records
 - Verifies the identity of technician, ensuring they are qualified/credentialed to the specific equipment
- **Digital Proof of Compliance:**
 - Reduced manual checklists and paper tags
 - Work orders processed faster, reduced field inspection times & visits – saving building’s labor costs
- **Flexible system:**
 - Extended to other building equipment
 - Affixes to the variety of surfaces and application’s environment





Trusted NFC

How most NFC Tags are used



- **Option 1:**

- **Constant URL stored on Tag, Write locked**

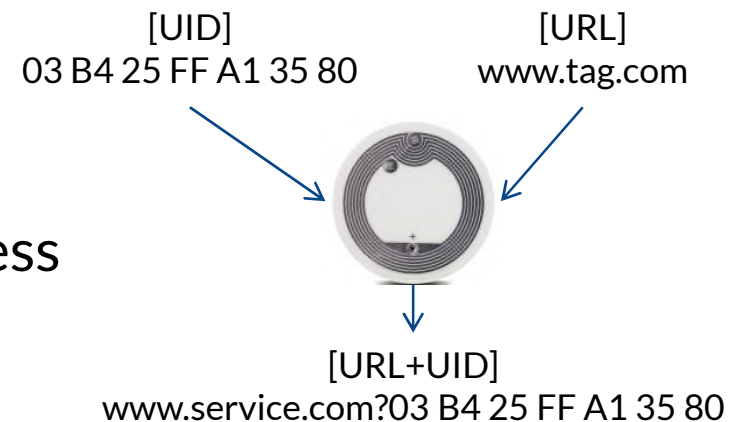
- All tags have the same URL
- Upon tap, the NFC phone will open its browser and access the URL provided by the tag



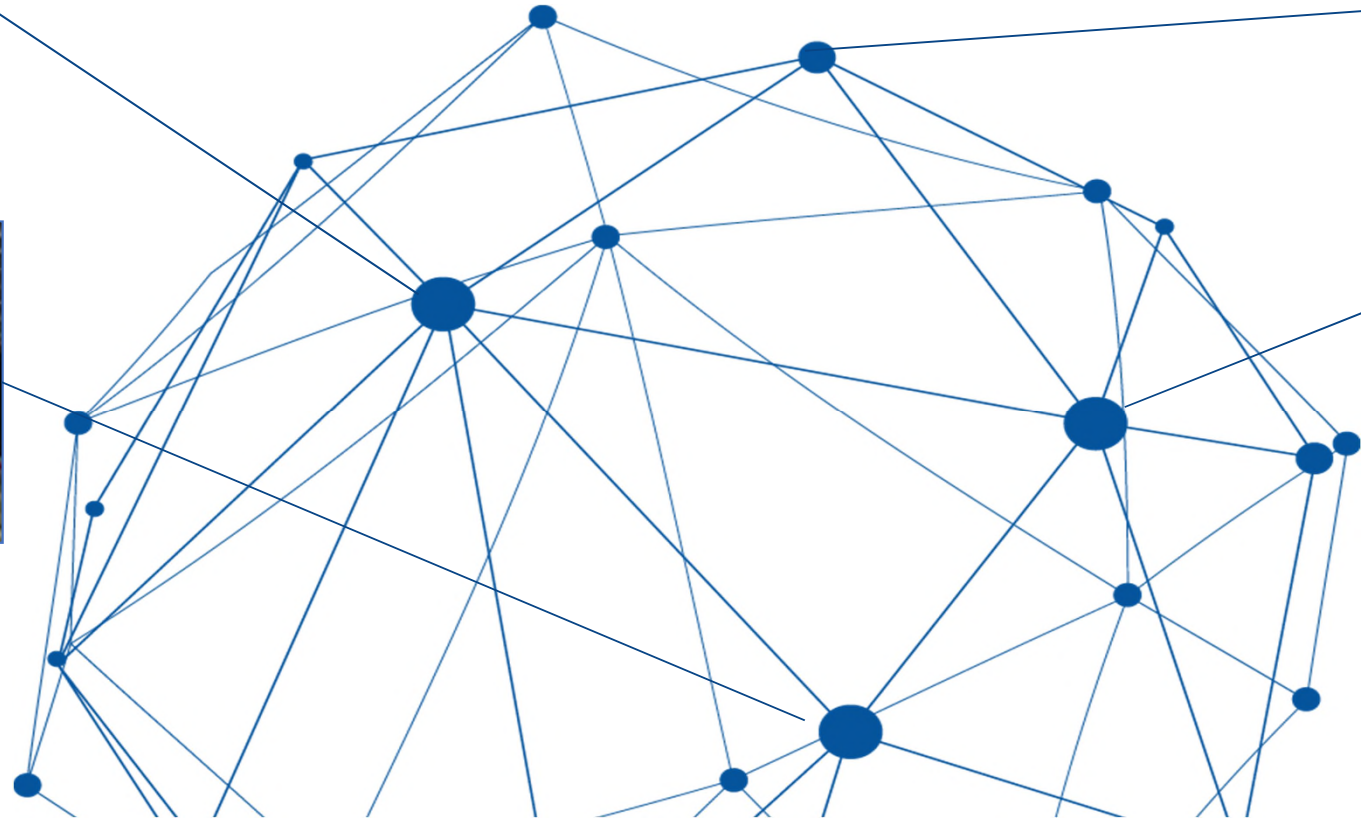
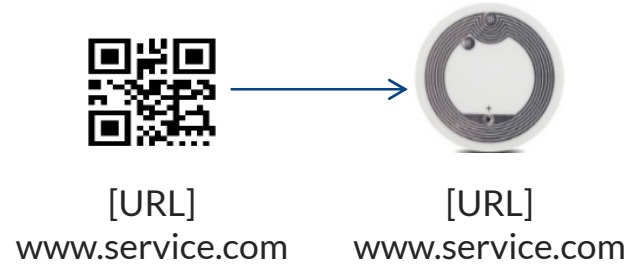
- **Option 2:**

- **URL Combined with Tag UID, Write locked**

- URLs unique by tag, but may be copied
- Upon tap, the NFC phone will open its browser and access the URL provided by the tag with UID as parameter



Current uses focus on “convenience”



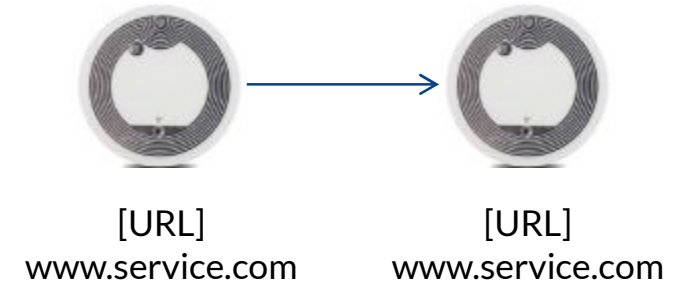
Why some applications need TRUST



- Option A:

- Copy the tag

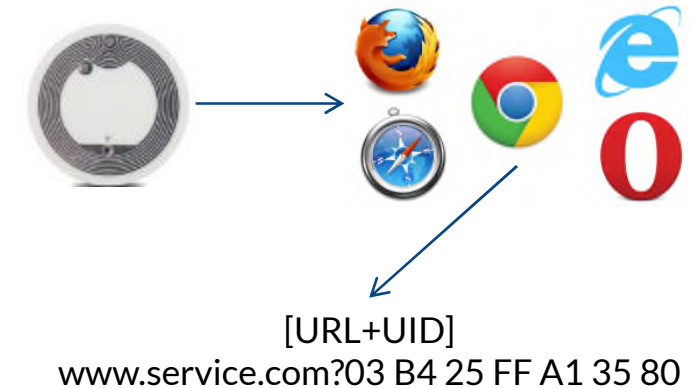
- Use one of many free NFC apps from App Stores
 - Read Tag 1 copy content to Tag 2



- Option B:

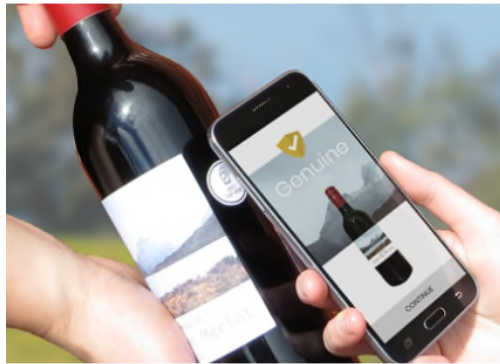
- Remember the URL

- Bookmark the URL after the first tap in your browser
 - or publish/retrieve it from Social media sites etc.
 - The server will **not** notice a difference from a tapped tag!



- *For **some** use cases this is critical, for others not*

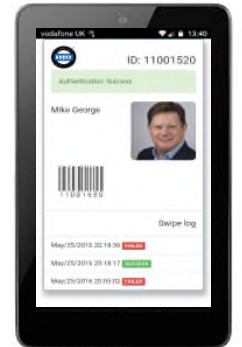
Brand Protection & Anti Counterfeiting



Authentic Products and Warranties



Authentic Documents

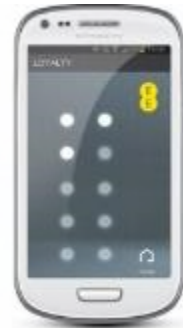
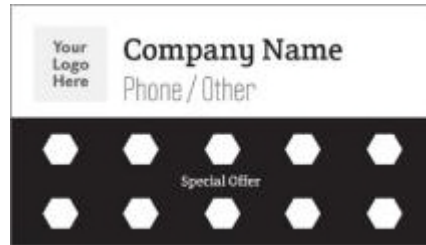


Authentic IDs

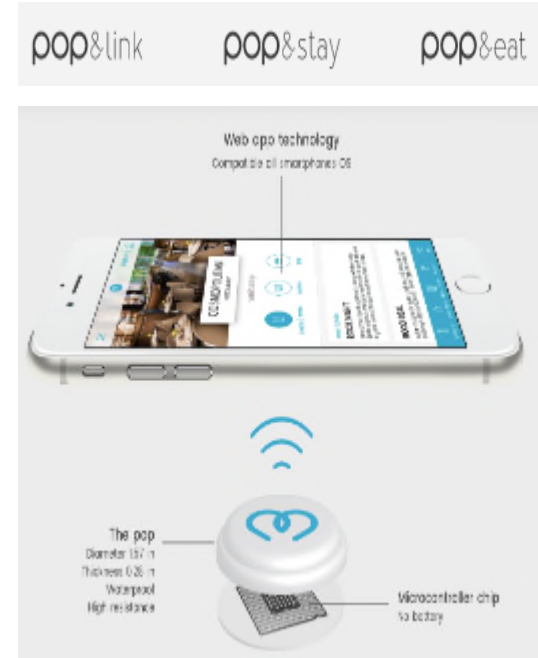
Trusted Transactions and Loyalty



Sweepstakes

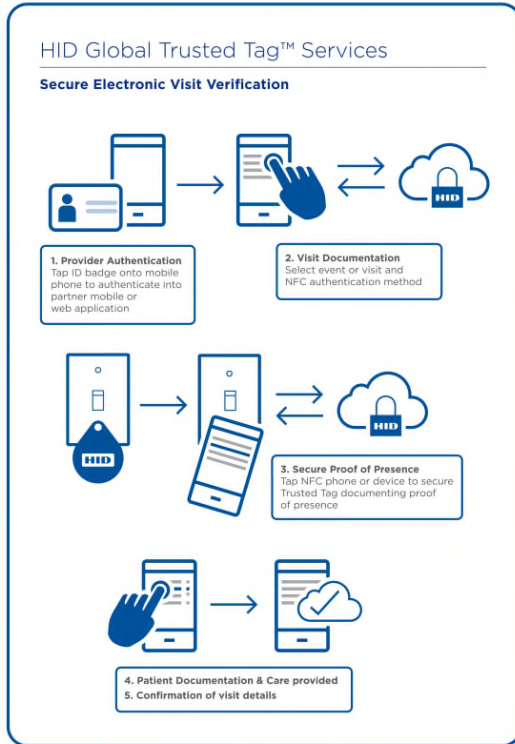


Loyalty Points

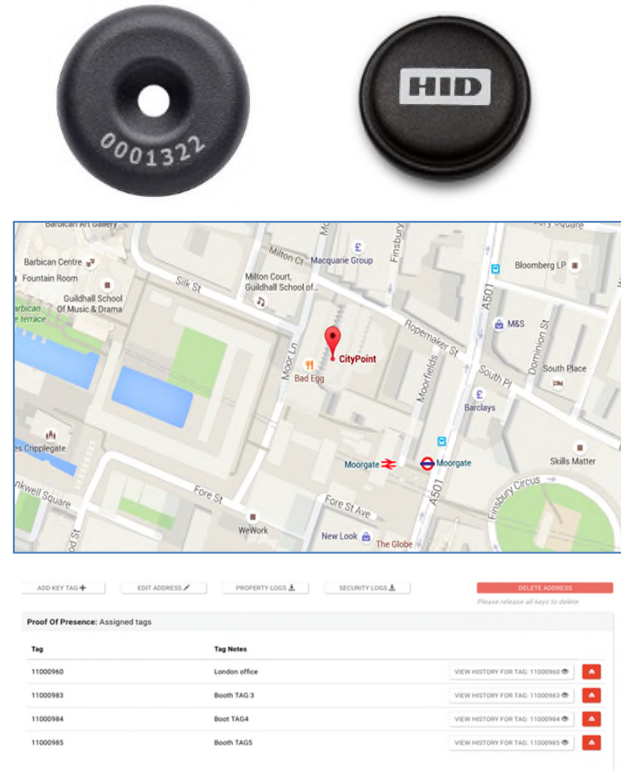


Consumer Services

Proof of Presence



Electronic Visit Verification



Guard Tours



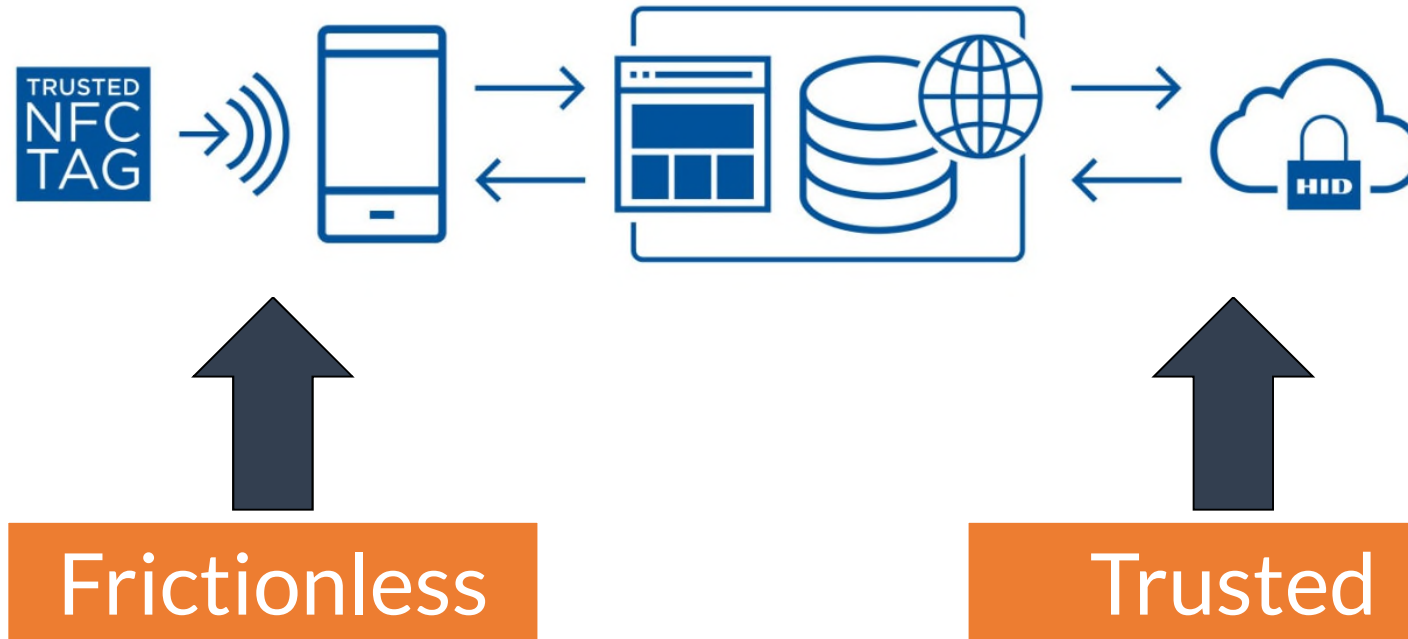
Maintenance and Compliance Inspections



Benefits of Frictionless Trust



Cloud Maintenance Software (CMMS)



Frictionless Benefits:

- Easy customer adoption
- Simple integration

Trusted Benefits:

- Unclonable Tags
- Proof of Presence & Compliance

How HID Trusted Tag[®] Services adds Trust



Tap	http://...ABCD
Tap	http://...7635
Refresh	http://...7635
Tap	http://...B423



Understanding HID Trusted Tag® Services

Innovative elements make “trust” a reality



- **Cloud Authentication Service**

- Strong authentication leveraging HID Multi-factor application
- Authentication service (SaaS) is easily integrated uses a web-service call into various business applications

SEOS



- **Trusted Tag™**

- NFC Forum Standards
- Transparent chip migration – not tied to specific chip or frequency
- Available in several form factors
 - Inlay, Key Fob, ISO card, Asset tag, eTamper
 - Compatible with other HID products & services





Q&A

Thank You