## Identity Atomic Processes in Detail

### Identity Resolution

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| **Process Description** | Identity Resolution is the process of establishing the uniqueness of a Subject within a program/service population through the use of identity information. A program or service defines its identity resolution requirements in terms of identity attributes; that is, it specifies the set of identity attributes that is required to achieve identity resolution within its population. |
| **Input State** | **Non-Unique Identity Information**:The identity information is not unique to one and only one Subject |
| **Output State** | **Unique Identity Information**: The identity information is unique to one and only one Subject |

### Identity Establishment

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| **Process Description** | Identity Establishment is the process of creating a record of identity within a program/service population that may be relied on by others for subsequent programs, services, and activities. |
| **Input State** | **No Record of Identity**: No record of identity exists |
| **Output State** | **Record of Identity**: A record of identity exists |

### Identity Information Validation

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| **Process Description** | Identity Information Validation is the process of confirming the accuracy of identity information about a Subject as established by the Issuer. |
| **Input State** | **Unconfirmed Identity Information**:The identity information has not been confirmed with the Issuer |
| **Output State** | **Confirmed Identity Information**:The identity information has been confirmed with the Issuer |

### Identity Verification

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| **Process Description** | Identity Verification is the process of confirming that the identity information is under the control of the Holder. It should be noted that this process may use personal information or organizational information that is not related to identity. |
| **Input State** | **Unverified Control**:The identity information has not been verified as being under the control of the Holder |
| **Output State** | **Verified Control**: The identity information has been verified as being under the control of the Holder |

### Identity Evidence Determination

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| **Process Description** | Identity Evidence Determination is the process of determining what evidence of identity must be presented (whether physical or electronic) for Identity Information Validation or Identity Verification. |
| **Input State** | **No Identity Evidence**:No evidence of identity has been determined to be acceptable |
| **Output State** | **Accepted Identity Evidence**:The evidence of identity has been determined to be acceptable |

### Identity Evidence Validation

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| **Process Description** | Identity Evidence Validation is the process of confirming that the evidence of identity presented (whether physical or electronic) can be admissible (i.e., beyond a reasonable doubt, balance of probabilities, and substantial likelihood). |
| **Input State** | **Unconfirmed Identity Evidence**:The evidence of identity has not been confirmed as being admissible |
| **Output State** | **Confirmed Identity Evidence**:The evidence of identity has been confirmed as being admissible |

### Identity Presentation

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| **Process Description** | Identity Presentation is the process of dynamically confirming that the Subject has a continuous existence over time (i.e., “genuine presence”). This process can be used to ensure that there is no malicious or fraudulent activity (past or present) and to address identity spoofing concerns. |
| **Input State** | **Static Presence**: The identity exists sporadically and often only in association with a vital event or business event (e.g., birth, death, bankruptcy) |
| **Output State** | **Active Presence**: The identity exists continuously over time in association with many transactions |

### Identity Maintenance

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| **Process Description** | Identity Maintenance is the process of ensuring that a Subject’s identity information is accurate, complete, and up-to-date. |
| **Input State** | **Identity Information**: The identity information is not up-to-date |
| **Output State** | **Updated Identity Information**: The identity information is more up-to-date |

### Identity Linking

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| **Process Description** | Identity Linking is the process of mapping two or more identifiers to the same identity for the purpose of facilitating identity resolution. |
| **Input State** | **Unlinked Identifier**: The identifier is not associated with another identifier |
| **Output State** | **Linked Identifier**: The identifier is associated with one or more other identifiers |