



The Correlation Channel ^(TM)

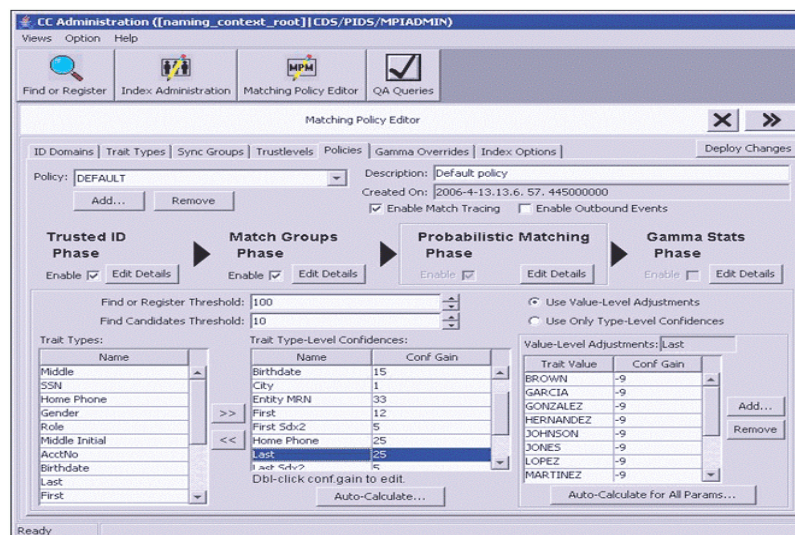
A software component to probabilistically detect and link identities, such as patients and providers in healthcare, customers in commerce, or suspects in public safety.

How it Works

Calibrate and Configure the CC matching algorithms for your own data, then have your application or integration engine feed demographic profiles to it synchronously or via messaging. The CC finds, assigns and correlates identifiers and returns them to the calling application.

Deployment Modes

- In an active role, the CC can be embedded into or connected to any or all PIDS-compliant participant systems (e.g. Cerner, HBOC, IDX) so that it manages all these identifiers one domain for your entire enterprise.
- In a passive role, the CC can be set up to correlate identifiers among any number of otherwise autonomous ID domains, building a cross-reference and providing suspected-conflict alerts
- In a hybrid role, the CC can correlate external identifiers and dynamically assign the master identifiers for a central data repository, providing the 360-degree view of the customer (patient) without requiring a distributed search query whenever integrated records must be retrieved.
- The CC provides the mapping facility for a CCOW installation, so that contexts can be communicated even amongst systems that do not share a common identifier domain (MRN base).



The CC supports multiple matching policies, each holding two conventional and two probabilistic phases.





Features and Benefits

Manageability, Flexibility, and Interoperability

- ★★★★☆ it's unfeasible to coordinate scattered chunks of logic with band-aid measures The solution: combine all aspects of person identification into one component - It comes under control. (Exceptions not wrapped)
- ★★★★★ Proprietary interfacing precipitates business-damaging errors and delays, and proprietary platform requirements bloat costs and hasten obsolescence The solution: comply with important SOA interfacing standards (OMG, HL7, ANSI) and is built on W3C XML. ANSI SQL, and Sun Java 1.5 - installs and runs easily in your environment.
- ★★★★★ It's cost-prohibitive to maintain more than one RDBMS The solution: run on any JDBC-compatible RDBMS, from single CPU to massive parallelism - keeps it simple.

Implementation Time and Cost

- ★★★★★ It is untenable to implement multiple solutions to the same problem. The solution: manage identities of any entity (e.g. patients, investors, customers, vehicles) - leverage it for your whole enterprise.
- ★★★★☆ Need it now but the interfacing is too complicated and time-consuming The solution: pre-map to several HL7 versions - easy to insert. (XML versions not pre-mapped)
- ★★★★★ Learning curve could be long and steep The solution: run on your enterprise SQL database of choice - leverages your existing investment in equipment and staff.

Performance

- ★★★★★ Real-time matching might be too slow The solution: perform 70 probabilistic matches/sec on a 80M persons on a 12-CPU machine - the speed is proven.

Accuracy

- ★★★★☆ Traditional matching code is not up to today's requirements for accuracy and partnering agility The solution: self-calibrate the probabilistic matching algorithm - realizes highest accuracy based on elements available. (Q4 08)
- ★★★★★ You don't want bad data overwriting good The solution: maintain authoritative profiles based on trust-levels by element by source. - the best data carries.
- ★★★★★ No single matching policy is adequate. The solution: combine multiple matching policies, each with duly configured and calibrated phases - accurate and robust.

Infrastructure

Logging



Logging is handled at both operation- and trace- levels via log4j including all important context, edits, standardizations, per-phase outcomes, confidence scoring, and matchbreaking overrides - It's all efficiently captured in an efficient and easy-to-harvest format

Monitoring



A moving window of matching decision outcome distributions and average response times is displayed in an Excel-based monitor. It is refreshed from operation logs each minute. Numerous analytical SQL views are provided - see systematic outcome skewing (need automated trend detection, not just manual)

Notification



The CC generates email in the event of a suspected source identifier duplicate. Recipient can reply to the CC to order an identity merge - achieve timely detections and corrections (site-specific merge-propagation-to-content logic is usually required)

Audit



Logs are harvested, cached, and restructured for analysis on an automated, periodic basis. A web portal page supports integrated case review. - see all facets of activity by user or by subject (need to connect the watchlist feature and add trait change events for the identity or userid)

Dependencies

Component: Resource Access Decision Service

Facility: DBMS/Oracle Server

Facility: CORBA Name Service

Facility: Log4J Logger

Platform: Java 1.5 or higher

Platform: OS/Linux

Schema: person

Pricing

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