



TCS's new Crystal Ball technology helps bridge the huge trust differential between individuals and enterprises by allowing the former to control the use of their personal data while enabling the latter to comply with stringent data protection regulatory norms.

THE CONTEXT



There is a huge differential in digital trust between individuals and organisations today, which is a challenge for both sides. Data security and privacy are of prime concern to individuals because they share their personal data across a host of online services from banking to shopping. At the same time, digital systems are typically designed to collect and mine this personal data in a non-transparent manner, and use it for marketing, cross-selling and profiling and tracking consumers.

TCS has addressed this digital trust differential by developing the Crystal Ball technology. This innovation empowers individuals to control and manage the flow of their personal data within an organisation and in real time. At the same time, it enables organisations to create a value-based consent-driven data exchange.

THE INNOVATION



The need to empower individuals on the use of their personal data prompted TCS to develop and patent its Crystal Ball technology. The technology essentially acts as an observer and enforcer of an individual's privacy preferences whenever they share their personally identifiable information with an enterprise or organisation. This unique enactment of data privacy principles provides control in the hands of an individual, thus increasing trust and accountability in the enterprise's applications.

How it can be implemented: An organisation can integrate the Crystal Ball into its systems using granular web services (APIs). The Crystal Ball can also be used to enforce consent by integrating it in an active/passive mode with business applications. This is done by dynamically masking, hiding or removing the individual's information based on consent choices along with an audit trail.

CHALLENGES OVERCOME



OPERATIONAL-LEVEL ENFORCEMENT

To create hooking points inside an enterprise's existing systems to observe the flow of data and enforce the individual's preferences. The TCS team used web service-based design that made it easy to integrate the Crystal Ball technology with existing enterprise systems without making too many changes to the existing software code.

MINIMUM INFORMATION DISCLOSURE

To limit data exposure within the organisation. The team developed presentation-layer dynamic data masking and un-masking technology that works on-the-fly without making any changes to the back-end. The team also automated requests for data access, thereby eliminating intervention by the organisation's employees and reducing data exposure/leakage.

POTENTIAL IMPACT



The emerging global regulatory environment (following the European Union's Global Data Protection Regulation (GDPR) along with India's own upcoming privacy regulation) is driving businesses to respect individual rights and put data protection front and centre. The Crystal Ball solution not only enables compliance for organisations but also empowers users to take control of their data. In addition, it can support businesses in building customer trust and loyalty as a market differentiator. The TCS team strongly believes that the Crystal Ball technology can help realise the 'My Data, My Control' dream of the MyData global movements that have arisen in the post-GDPR world.