IOWN INTEGRAL

NTT R&D FORUM 2024

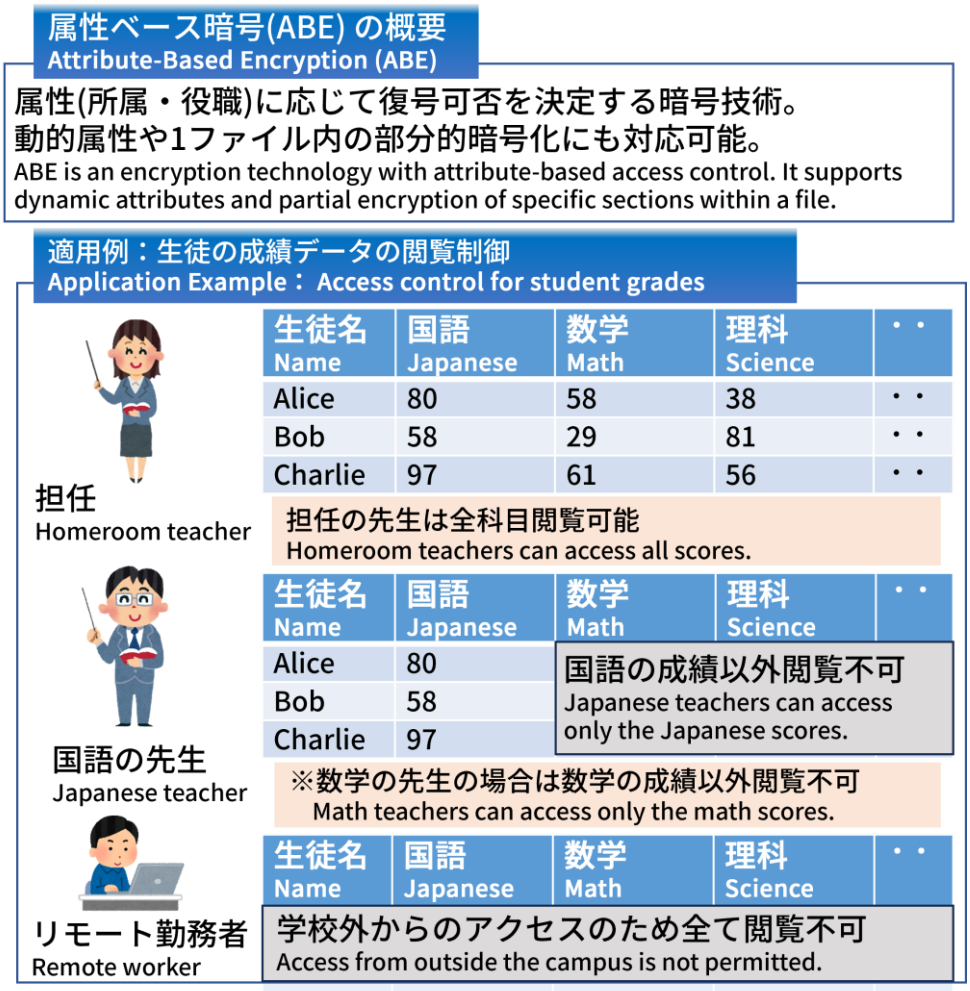
BUSINESS

β 03-01

Privacy protection using Attribute-Based Encryption (ABE)

ABE prevents personal data leakage and unauthorized access through flexible and dynamic access control

#Business Resilience



///Technical Issue

Companies should be more considerate in handling sensitive data due to the increasing consumer privacy awareness and the rise in data breaches.

///Research Goal

Improve competitiveness by promoting data use with privacy protection and reducing the risk of sensitive data breaches.

---Technology

With NTT Group's technology, the following can be achieved

- Fast encryption and decryption.
- Policy implementation using AND, OR, and NOT operators.
- Management of multiple authorized key issuers.
- Support for hybrid shceme combining AES.

---Novelty

- Fine-grained access control that adjusts viewing permissions based on the attributes of the decryption user.
- Support for dynamic attributes such as time and location.
- Encryption and access policies are embedded in the file itself, maintaining governance irrespective of storage location.

---Applicable Business

It is possible to implement fine-grained access control for data containing sensitive information, or specific parts of such data, based on the attributes of the viewer.
Example: In the context of student grades, homeroom teachers can access all scores, whereas math teachers can access only the math scores.
Scheduled PoC and system/service integration support timeframe: 2024/4Q

Related Exhibition=β03-02 Exhibitors= NIPPON TELEGRAPH AND TELEPHONE EAST CORPORATION

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