

(BUL) project: Object Oriented Security and Access Control of Multimedia Content and Services

NSERC-CRD project: Access Control based on Content Encryption and Secret Sharing (ACCESS)

The BUL and NSERC-CRD projects provide matching funds for the development of efficient access control architectures in Multimedia security. The overall objective is to develop the ACCESS architecture for secure access control that integrates biometric authentication, shared access encoding and content encryption technologies. The target is to provide enhanced multilevel security and access control, either to multimedia content or to services and applications while at the same time provide privacy and confidentiality. Functional requirements, design constraints, and implementation challenges are:

1. Using secret sharing based authentication for enhanced security, privacy and flexibility.
2. Using biometric encryption for increased security and joint secret sharing encryption / fingerprinting for shareholder (user) tracing.
3. Allowing cost effective distributed computing and minimizing the dependence on centralized control over security management.
4. Providing a flexible commercially attractive architecture that can be:
 - a) diversified and provide solutions to a variety of applications, and
 - b) deployed or integrated into existing security infrastructures.

