# Transformation and Exchange of Multimedia Objects in Distributed Multimedia Systems

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## Abstract:

One of the challenges in the design of a distributed multimedia system is to devise suitable specification models for various schemas in different levels of the system. Another important research issue is the integration and synchronization of heterogeneous multimedia objects. In this paper, we present our models for different multimedia schemas and transformation algorithms that transform high-level multimedia objects into schemas that can be used to support the presentation and communication of the multimedia objects. A key module in the system is the Object Exchange Manager (OEM). In this paper, we present the design and implementation of the OEM module, and discuss in detail the interaction between the Object Exchange Manager and other modules in a distributed multimedia system.

**Keywords:** Distributed Multimedia Systems, Multimedia Schemas, Object Exchange Format, Quality of Service, G-Net Model

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- Introduction
- The Architecture and The Transformation Approach
- Multimedia Schema Models and Transformation Algorithms
- An Example of the Transformations
- The Transformation from MCS to Network Primitives
- Multimedia Object Exchange Manager
- Implementation of the Experimental System
- Conclusion and Future Work
- Acknowledgement
- References
- About this document ...

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