Knowledge and Context-Based Strategies for 3D Video Content Adaptation Decision

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Scenario Description

Adaptation Decision Evolution
• No metadata;
• Metadata without data association;
• Metadata with data association.
☞ Still poor results.

Simplified Framework for Multimedia Adaptation

3D Content Adaptation

Different State of the Art Architectures

Static look-up

Knowledge-Based

Utility Based

Optimization Approach:
• Multimedia Content Characteristics;
• Adaptation Parameters;
• Context Properties.
☞ Optimization Variables.
• Dependencies Between Variables.
☞ Optimization Restrictions.
• Choosing amongst the feasible adaptation operations.
☞ Objective function(s).

Test Scenario Demonstration

Objectives
• Investigate and achieve a proper 3D content representation for adaptation/presentation;
• Investigate the feasibility of an integrated approach for 3D content adaptation decision taking;
• Define, represent and use, in an advance form, the necessary metadata input for the chosen adaptation decision taking approach, with the aim of providing the best QoE possible for the users.
• Implement a knowledge and context-based 3D content adaptation decision system.