Modelisation Compression Interaction 3D

Composante
École Nationale
Supérieure
d'Électrotechnique
d'Électronique
d'Informatique
d'Hydraulique
et des
Télécommunications

En bref

> **Code:** N9EN16C

Présentation

Objectifs

- Be aware of the different representations of 3D models: discrete models, with or without topology, parametric and/or implicit continuous models.
- Implement a compression algorithm for a 3D model in order to transmit it.

Description

The part on 3D representations is a suite of 5CTD. For each course, a 45mn lecture presenting a 3D model is proposed, then, each group presents a research paper which proposes a 3D model of the studied type.

Lecture 1: discrete surface models

Lecture 2: discrete volume models

Lecture 3: subdivision models

Lecture 4: parametric representations

Lecture 5: implicit representations

TP / Project: a context of transmission of a file and its progressive decoding

Each group chooses, studies and implements an article that proposes a progressive representation of a 3D model and implements this model to progressively transmit 3D objects in the proposed context.

Pré-requis obligatoires

knowledge on parametric models, points sets at least for curves and in 2D is necessary.