Generating Expressive Facial Mesh Animation : A Survey

Introduction

- Application and significance of facial animation
- Significance of natural of animation
- Expensiveness of high-quality expressiveness animation methods(hand and capture)
- Significance of automating or simplifying such process.

- One-line introduce each methods
  - Jali, VisimeNet
  - MeshTalk
  - D3DExpression

JALI

- Introducing: a linguistic approach, an old approach
- Old way of blendshape viseme mapping (many-to-one)
- Introduce JALI(JALI blendshape)
- JALI mapping
- JALI language model (suppressor etc)
- Strength of JALI => used at commercial application
- Limitation of JALI => manual labor

VisemeNet

- Significance of Audio to animation.
- Introduction(input and output)
- network overview
- Pretrain network
  - And datastet
- Main network
  - And dataset
- Pros of VisemeNet
- Limitation of VisemeNet

Meshtalk

- Introduction
- network overview
  - Overview
  - Speech Data
  - Mesh Data
- Pros of VisemeNet
- Limitation of VisemeNet

D3DExpression

- Brief introduction
- network overview
  - Overview
  - Speech Data
  - Mesh Data
- Pros of D3DExpression
- Limitation of D3DExpression

Evaluation and Discussion

- Compare Input and output w/ sheet

- (total)Training data comparison
  - Complexity and size(length)
- Training