USER INTERACTION IN OPTICAL MUSIC RECOGNITION

Analysis and Examples

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OVERVIEW

• Advantages of User Interaction
• Demonstrations
• Client vs. Server
• Optical Music Recognition (OMR)
• Client-Side Development Challenges
ADVANTAGES OF USER INTERACTION

• User can see the effects of their choices in real-time
• Allows for more informed, less arbitrary decisions
• User can correct computer’s mistakes
DEMONSTRATIONS
CLIENT-SERVER MODEL

• Server:
  • Many powerful computers in remote locations
  • Only runs before page load and after page submission (generally), so inherently non-interactive
  • Run-time of programs less important than client-side, as they can run in the background

• Client:
  • Runs on your computer, in your browser
  • Different browsers can run the same program differently, so behaviour must be standardised
  • Generally much less computationally powerful than server-side execution
  • Same program will run slower client-side vs. server side
  • Sometimes programs can be prohibitively slow
  • Starts executing once page has loaded
OPTICAL MUSIC RECOGNITION (OMR)

- The process of converting digital images of music scores to symbolic notation
- Many steps involved in OMR
  - Rotation
  - Cropping
  - Binarisation
  - Despeckling
  - Staff Finding/Segmentation
- Some steps automatic, others are open to user input
ADVANTAGES OF INTERACTIVITY IN OMR

• User can preview expensive image processing operations and send the parameters to the server

• Server can still do all the “heavy-lifting”

• Once parameters for one image are chosen, same parameters can be applied to all images from that collection
THANK YOU!