Cloud Gaming Service

Cloud Gaming is a novel cloud-based on-demand gaming service to allow players to play games on anytime in anywhere. Two major techniques are used to stream the gaming contents to Players: Instruction-based Streaming and Image-based Streaming.

Proposed Method: A Hybrid Cloud Gaming System

Server Side: 
- Upper Objects
- Lower Objects

Network
- Instruction-based Streaming
- Image-based Streaming

Client Output
- Instruction-based Streaming
- Video-based Streaming

Final Output

Advantages:
- Built upon GamingAnyWhere, Maintain availability to many Devices
- Improve Graphic Quality by Rendering part of the contents locally at the client’s device.
- Offloading some of the works to client help to lower server workload.

Evaluation

<table>
<thead>
<tr>
<th></th>
<th>PSNR</th>
<th>SSIM</th>
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</thead>
<tbody>
<tr>
<td>Image-based</td>
<td>43.96</td>
<td>0.9964</td>
</tr>
<tr>
<td>Hybrid System</td>
<td>46.20</td>
<td>0.9966</td>
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