A Hybrid Game Contents Streaming Method to Improve Graphic Quality Delivered by Cloud Gaming

Laboratory for Software Design & Analysis

established in 2005

⚓ Cloud Gaming Service

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Cloud Gaming is a novel cloud-based on-demand gaming service to allow players to play games on anytime in anywhere. Two major technqiues are used to stream the gaming contents to Players: Instruction-based Streaming and Image-based Streaming.
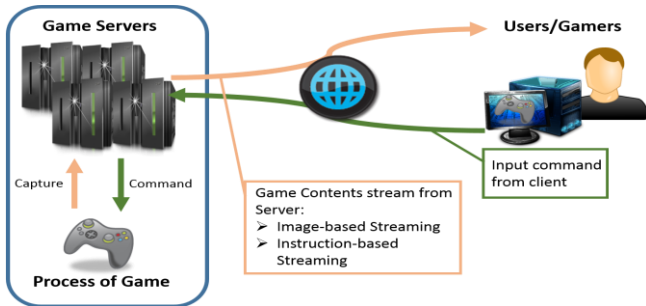
|	Instruction-based	Image-based
Local Device	High Requirement	Low Requirement
Graphic Quality	Original	Degraded
Usage	Small Area	Comerical

⚓ Proposed Method: A Hybrid Cloud Gaming System
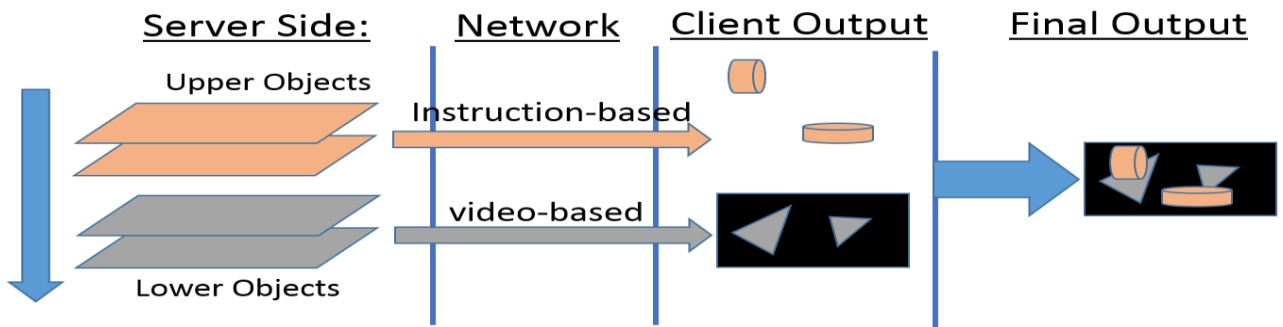
Advantages:

➤ 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
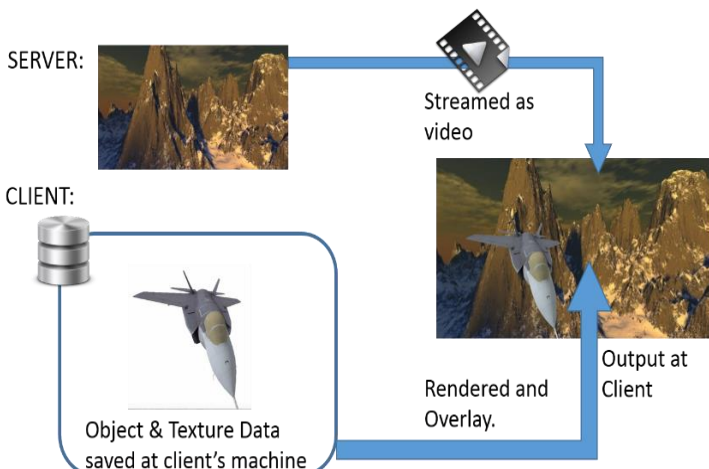
	PSNR	SSIM
Image-based	43.96	0.9964
Hybrid System	**46.20**	**0.9966**