

Designing enjoyable entertainment products

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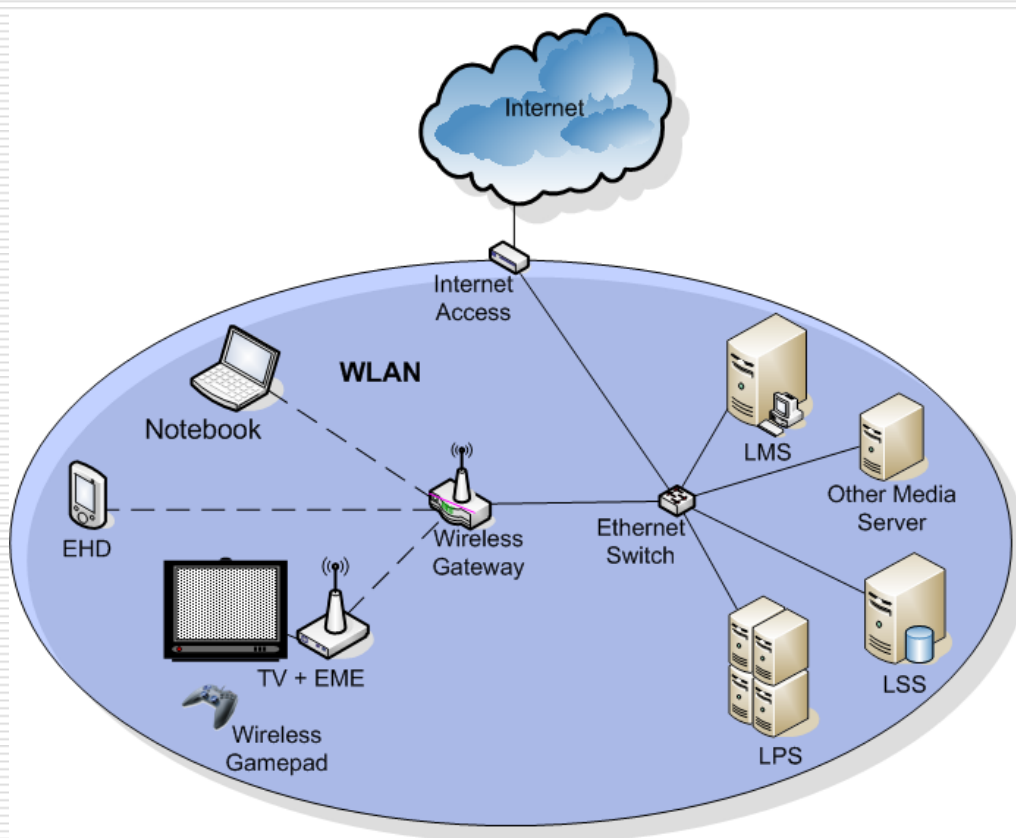
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Pervasive entertainment system

Game access on devices that typically do not possess a full set of technical requirements to run video games

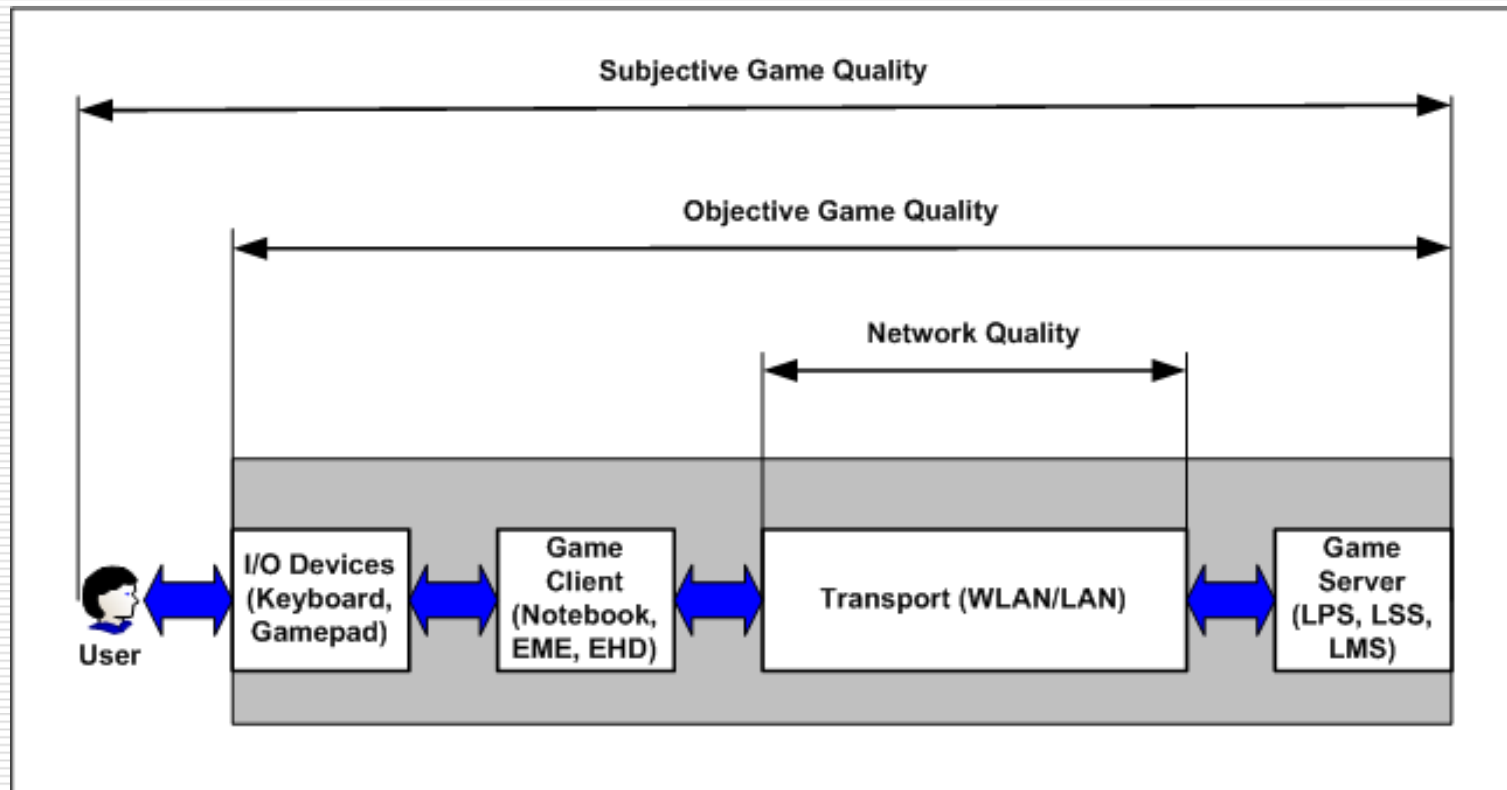
Cost-effective infrastructure for running games simultaneously on a server. Single server utilization to serve multiple end-devices



Specific features

- From a task analysis perspective
 - Meta-tasks
 - Installing the software and hardware
 - Starting the system
 - Adjusting one's user settings
 - Selecting a game for play
 - In-game tasks
 - All in-game functions specified by the game developer should be seamlessly supported, and the resulting in-game usability is the domain of the game developer, and not of ours
 - Effects that might influence the in-game usability
 - The introduction of additional end-to-end system latency
 - Unintuitive or complicated mappings of the in-game control functions onto the user's gamepad
 - Parental mediation functions (e.g. timed gameplay)

Scopes of quality



Goals for system evaluation

□ Simplified view

- Evaluate system's QoS from the user's point of view
- Find a relation between subjective and objective quality parameters
- Identify a range of these parameters for "good" user experience and system performance
- Inform system developers

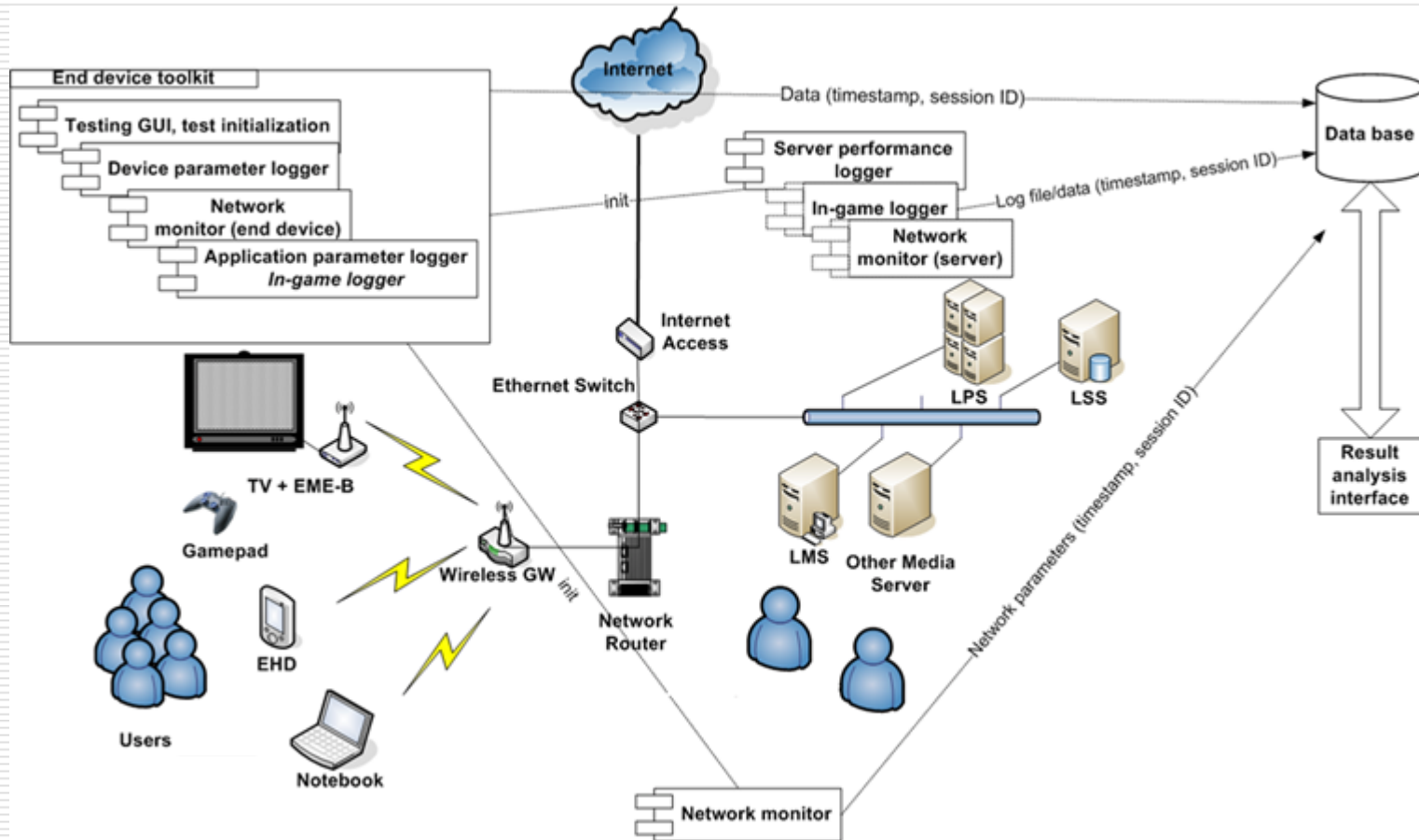
Methods, problems

- Focus on formative and summative evaluation phases and test tools
- Usability and user experience tests
 - Heuristic evaluation
 - Laboratory studies
 - Field tests
- None of the SoA methods guarantees a fully successful evaluation
- Use a combination of subjective methods and objective measures

Multilevel analysis approach

- Capturing user experiences and perceptions (PQoS/UX/usability...)
 - User tests (quantitative/qualitative)
 - Heuristic analysis (quantitative/qualitative)
- Capturing system's behavior (technical – system components)
 - Measurements (network, objective-quantitative)
 - Performance logs (objective-quantitative)
- Analyze subjective and objective data
 - Check for correlation
- Compare gaming with the ordinary PC system

Testbed



Test tools: challenges

- Tools development
 - Data collection
 - Options
 - Automation
 - Minimal influence to the system's performance
 - Efficient, customizable and easy to use
 - Lab tests
 - Field trials
- Result analysis
 - Efforts: time, personnel
 - Start from simple cases
 - Reduce complexity of data
- Feedback to designers
 - Clear
 - Persuasive

Thank you



www.elios.dibe.unige.it



www.gamesatlarge.eu