



IMGD 1001 - The Game Development Process: QA

by

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QA

- Quality Assurance
 - ♦ Also known as
 - QE (Quality Engineering)
 - SQA (Software QA)
 - Testing
 - Over The Wall
 - ♦ (more on this later)

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What is Quality?

- Ideas?



What is Quality

- It's NOT:
 - ♦ An abstract measure of goodness
 - ♦ An indication of zero bugs
- It IS:
 - ♦ Meeting expectations
 - ♦ A measure of state
 - ♦ A risk management tool



Timex vs Rolex

- Timex:
 - ◆ Costs \$20
 - ◆ Made of plastic
 - ◆ Tells time accurately
- Rolex:
 - ◆ Costs \$2000
 - ◆ Made of gold
 - ◆ Tells time accurately
- Did customers get what they expected?



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Quality is related to Value

- A "Good deal"
 - ◆ exceeds quality expectations for the price
 - usability
 - works as expected
 - doesn't crash
- A ripoff
 - ◆ paid too much



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How to test games

- Mini-outline
 - ◆ Capture user requirements
 - ◆ Set quality goals
 - ◆ Measure a baseline
 - ◆ Test against the baseline
 - ◆ Verify fixes



Capture user requirements

- Expectations
 - ◆ Although many are implied:
 - Fun
 - Functional
 - Matches genre expectations
- Get as much detail as you have time for



Set quality goals

- Based on concrete measurements
 - ◆ You need quantitative results
 - ◆ Example measurements:
 - Bug priority
 - Bug severity
 - ◆ Goals:
 - Zero known crash bugs
 - <10 critical bugs
 - etc



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Measure baseline

- If possible
 - ◆ New titles may not be in shape to get baseline quality measurements
- Create test plans against requirements
- Methodical repeatability is key
- But human interaction too
 - ◆ You can't automate all game testing
 - ◆ Have to test for:
 - Fun
 - Unanticipated bugs

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Start measuring (testing)

- When a feature is delivered
 - ♦ Execute plans for that feature
 - ♦ Start baseline testing if you didn't do it earlier



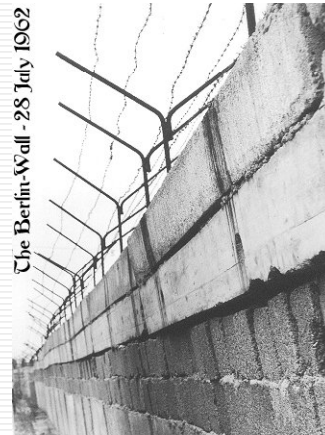
Verification

- When developers claim a bug is fixed
 - ♦ Verify it
 - ♦ Shouldn't be adversarial
 - ♦ Avoid it with:
 - Good product requirements
 - Clear milestones
 - Good quality criteria defined FIRST



The Wall

- Devs sometimes want to “throw it over the wall”
 - ♦ They think of QA as a separate universe
- THIS IS VERY BAD
 - ♦ Fight the urge
- Relationship should be cooperative



Interesting measurements

- Total number of bugs
- Bug find rate
- Bug fix rate
 - ♦ When fix > find, project has turned corner
- Test case execution percentage
- Use for predictions of:
 - ♦ Stability
 - ♦ Release dates



Skills needed for QA

- Technical knowledge
- Good communications skills
- Curiosity and persistence -- puzzle skills
- Strong personality
- Attention to detail
- Tolerance for repetition



Special considerations

- MMO environments
- Open source