



The Evil Triangle

A Constantly Rotating Target

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Background

- Started in design before becoming a producer
- Atari Corp. – Director of Product Development, 1986-87
 - Responsible for 35 external projects
 - Expected to start up 35 more
 - Impossible for one person – released 20 SKUs
 - “Cheap” and “fast” were everything at Atari Corp.
 - “Good” never came up
 - Learned how to get things done



Activision, 1988-2000

- Worked on 120 external projects
- And 20 internal projects
- My reputation, 1988-1989: “a hell of an executor”
- Japan, 1990
- My rep, post-1991: “the Shanghai guru”
- Trained 6 up-and-coming producers
- 5 awards



More Recently

- Mastiff Games, 2005
 - Top Gun for Nintendo DS
- Yahoo! Games, 2006
 - 5 games for IPTV (uVerse)
- Naked Sky Entertainment, 2009
 - Star Trek D·A·C for XBLA
- University of Southern California (USC) – <http://www.itp.usc.edu>
 - Designing & Producing Video Games
 - Video Game Quality Assurance
 - Game Startups Workshop



The Evil Triangle

Also called “The Impossible Triangle”



The Evil Triangle

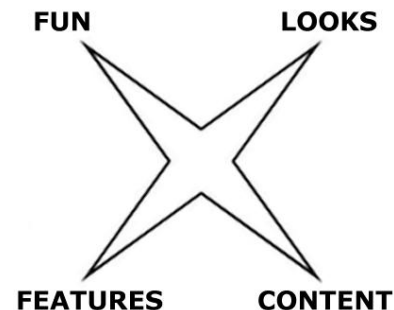


- The classic wisdom holds that a project cannot be cheap **and** fast **and** good; that it can only achieve two of the three.
- Whether or not you believe in the Evil Triangle, you have to constantly monitor the project, and reassess your progress, so that you know where to put the most focus for the next sprint.

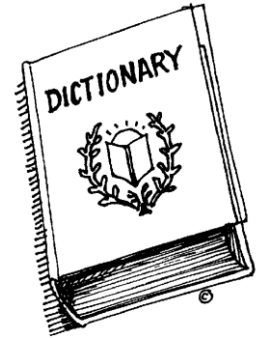
The Evil Triangle



- And even if you do believe that you can have only two points of the triangle, you never have to entirely give up on the third.
- A key to achieving maximum results is to remember that "good" is a multi-pointed shape in its own right.

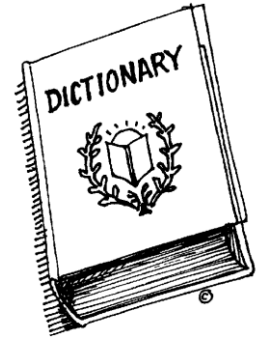


Let's define terms



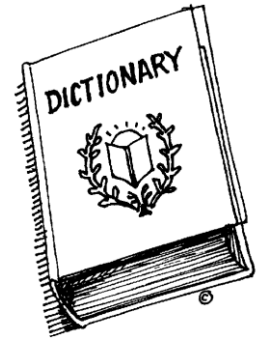
- "Fast" – Time (within planned schedule)
- "Cheap" – Cost (within planned budget)
- "Good" – Much more complicated to define (so we'll start there)
- "Stakeholders" – party with vested interest
 - Primary: publisher, IP owner, platform holder (and developer, if developer owns IP)
 - Secondary: developer, retailer, end user

QUALITY ("Good")



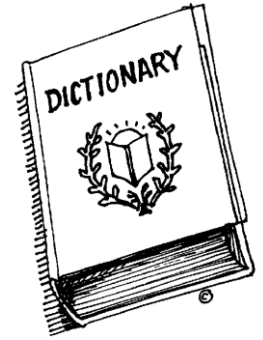
- Time and money are easily quantified; but “quality” is subjective.
- Different people have different ideas of quality.
- Quality – the “good” corner of the triangle – has multiple corners of its own. Quality can rightly be considered to consist of:
 1. Looks (visual quality, audio quality)
 2. Functionality (features, usability) (and no bugs)
 3. Length / depth / complexity (levels, world size, options, story – in other words: content)
 4. Fun

Q1: LOOKS



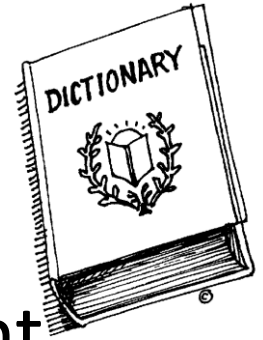
- What affects visual & audio quality
 - Talent and experience can reliably produce visual/audio quality
 - Time can produce quality; rushed work looks rushed
- What visual quality affects in a project
 - Should not cause a significant delay
 - Can add to cost, but usually the major cost is in the programming
- Cutting visual quality looks bad; no good reason to ever sacrifice here

Q2: FEATURES



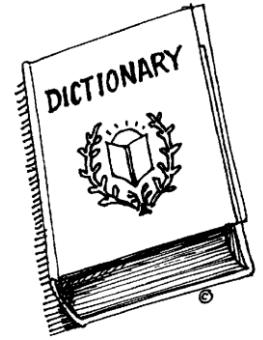
- What affects functionality/usability quality
 - Talent, imagination
 - Competitive drive (comparing to competitive products)
 - Time, and the drive to constantly improve (change requests; “feature creep”)
- What functional quality affects in a project
 - Time (more features take more time to implement and test)
 - Cost (more personnel, more time mean higher cost)

Q3: LENGTH / DEPTH



- What affects game length/depth: content
 - Levels, worlds, areas
 - Story, characters, missions/puzzles
- What game length/depth affects in a project
 - Art/animation time and cost
 - Audio (voice-overs, sound effects) time and cost
 - Programming time and cost
 - Quality Assurance testing time and cost

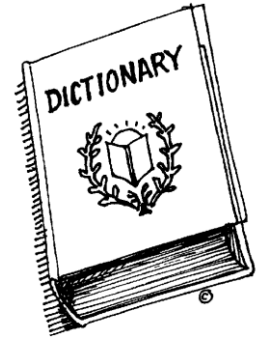
Q4: FUN



- THE MOST IMPORTANT QUALITY!
- What affects fun
 - Talented design (can cost more)
 - Iterative design (takes more time)
 - Play testing (adds to time and cost)
- What fun affects in a project
 - Effect on team morale
 - Effect on overall sales



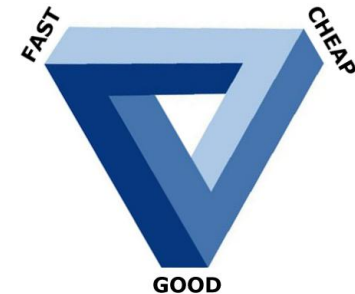
Q4: FUN



- But fun does not require more features, complexity, fancy animation, expensive voice acting talent
- We often forget the value of simplicity
 - ‘Tis a gift to be simple
 - Simplicity can be elegant; “less is more”
 - But there’s always intense pressure to add more (“feature creep”)



TIME



- What affects time (man-hours)
 - Experience: inverse relationship with time
 - Experienced team
 - Experience with the technology
 - Experience with the genre
 - Experience with the platform
 - Experienced team management
 - Experienced project management
 - Experienced publisher management
 - Quality
 - Features, more so than assets
 - Change requests



Inverse Relationship of Experience to Time

TIME



- What more time affects
 - Quality. The more time, the better the product (up to a point) – the more polish
 - Cost. The more man-hours, the greater the cost
 - Features. When there is time: natural inclination to add features (“feature creep” danger)
 - Length / Depth. Time permits the creation of more content

COST



- What affects cost
 - Time (man-hours)
 - Features cost money
 - Programming costs money
 - Testing costs money
 - Quality
 - Experienced talent costs money
 - Head count
 - Overhead costs
 - Head count quandary: the mythical man-month (MMM)



COST



- What more money affects in a project
 - Quality. More money means higher quality
 - Experienced talent
 - And more asset creation time or talented personnel*
 - More money means you can have more features
 - More programming time (or head count – *subject to the MMM rule)
 - More testing time (or testers*)



PRIORITIZING the TRIANGLE



- Rolling Stones: “You can’t always get what you want.”
- If you truly can’t have all three, which two are most important (at the moment) for your stakeholders?
- Unless it’s a triple-A game, most likely the schedule and budget cannot be lengthened; and they may even be shortened!
- So “good” may have to give somewhere. But where?
 - Functionality (features, usability)?
 - Length / depth / complexity (levels, world size, options)?
 - Looks (visual quality)?
 - Fun?



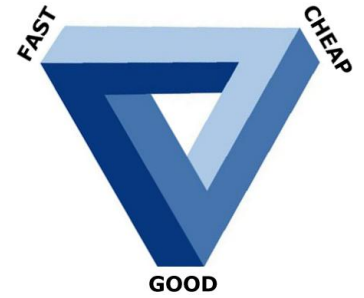
“Fast”



- When fast is paramount
 - Low-cost, and/or small-scale projects
 - Time-sensitive projects
 - Christmas releases
 - Movie IP release date
- When speed is expendable: AAA games
- Examples (next slides)
 - Top Gun DS
 - Star Trek D·A·C



Top Gun DS



- Mastiff's Head
Woof, Bill Swartz,
needed schedule
shortened
- Fun was not
sacrificed
- Visual quality was
not sacrificed
- Audio was done on
the cheap, though



Star Trek D·A·C



- Producer Ben Hoyt did not believe in the Evil Triangle
- Did not sacrifice fun
- Did not sacrifice visual quality
- Two major features had to be cut, though



“Cheap”



- When budget is paramount:
 - Market economics (low-price product)
 - XBLA
 - iPhone
 - Publisher unwilling/unable to spend
- When money is no object: AAA games
- Budget examples
 - Star Trek D·A·C
 - Yahoo! Games IPTV projects
 - Shanghai: Second Dynasty (overspent / market shift)



“Good”



- When good is paramount: AAA games
- When [some aspect of] quality is flexible
 - Usual cuts: features, length/complexity
 - Rare to sacrifice visual quality
 - Fun is never expendable
- Example: when “good” is paramount
 - L.A. Noire (Team Biondi / Rockstar)
 - 8 years, and at least \$50M
 - Legal troubles; perpetual crunch; money probs; closure
 - Money and time do not guarantee happy ending



The upshot



- Sometimes the bosses absolutely refuse to allot any more money (game must be "cheap"). Unless the game can't be finished without spending more.
- Often, the publisher has a crying need for the product to ship on time, or even before ("fast"). But we've all seen product dates slip.
- And the stakeholders look bad if the game is not fun or is poor quality (it has to be "good").

The upshot

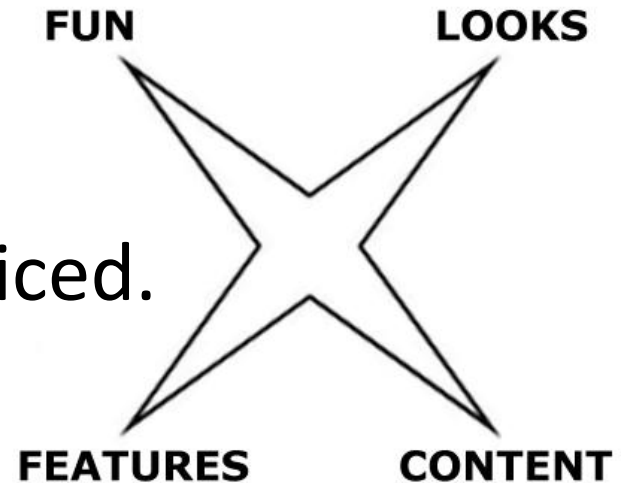


- With a AAA game, there is no evil triangle problem. You can have a big budget and a long schedule, because the sharpest point of the triangle must be the game's quality.
- But for the rest of us, the triangle usually is a problem... Or is it? It doesn't have to be!
- Since "good" encompasses features, content, fun, and looks, there's a lot of room for tradeoffs – without sacrificing much quality.

“Good” is Not a Triangle Point

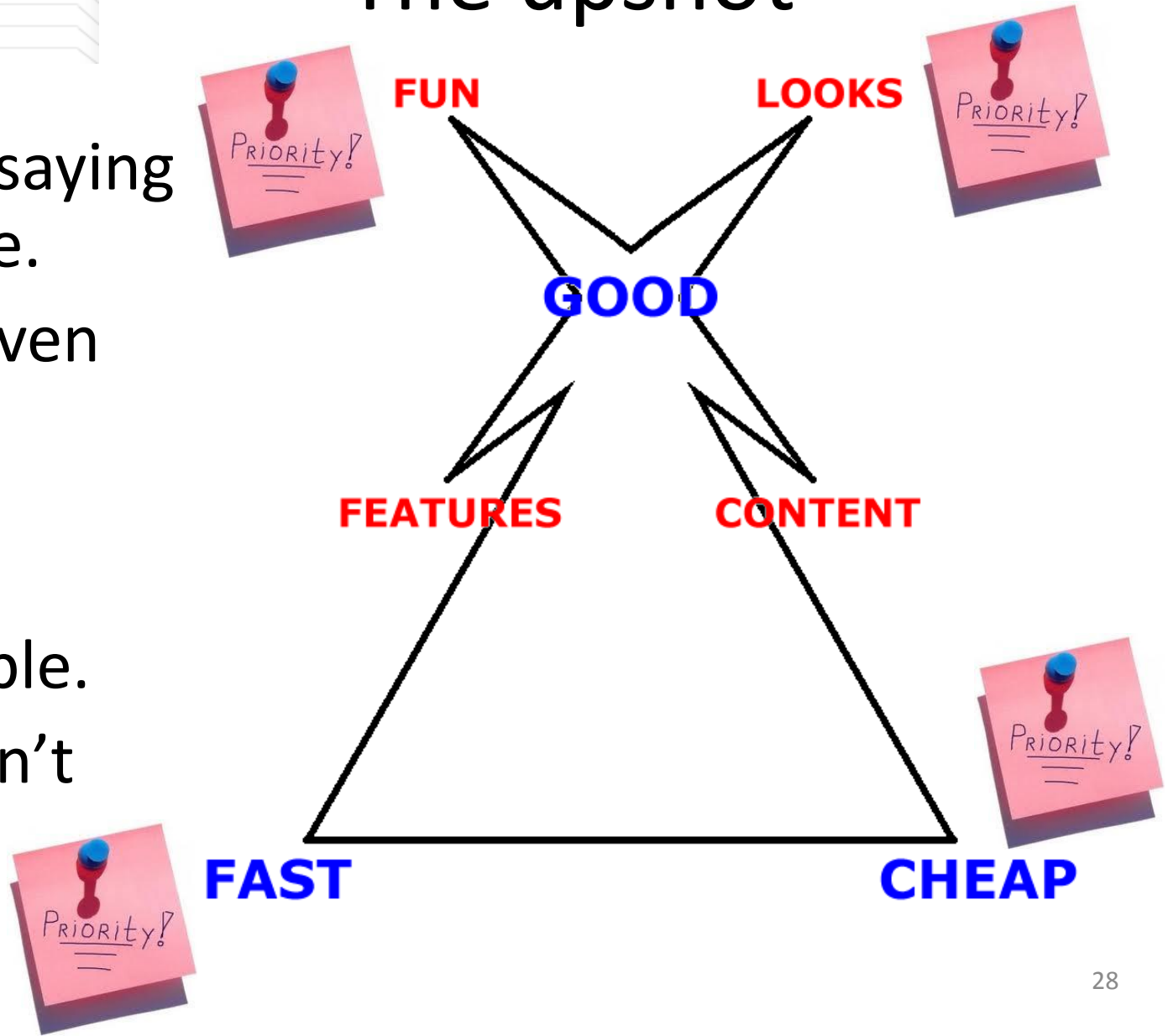
- “Good” is a 4-pointed star in its own right
- So that’s where you can make your quality adjustments

- Fun must never be sacrificed,
- And looks should not be sacrificed.
- But features can be reduced,
- And content can be shortened.



The upshot

- The old saying isn't true.
- It isn't even really a triangle.
- It isn't impossible.
- And it isn't evil.





Thanks for listening!
Questions?

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