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Change is Good

The Importance of Iteration Within a Character Art Pipeline

- **Narrative: Creating a “human” character**
- **Art Direction: Populating A Changing World**
- **Combat Design: New challenges and Unique Problems**







Crucified mechanical thing
Crucified mechanical thing

Fountain here





Elizabeth

- Creating a character that seemed human...
- Not just another escort mission...



From Gibson Girl to Femme Fatale

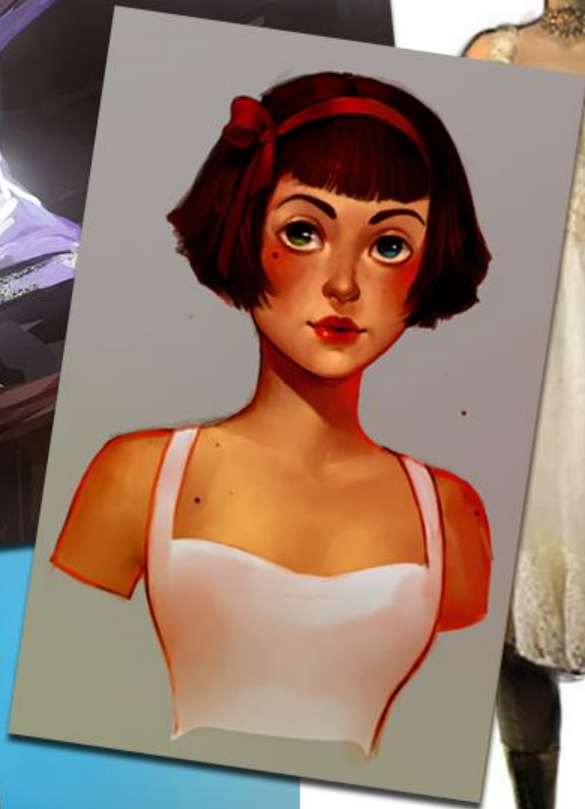
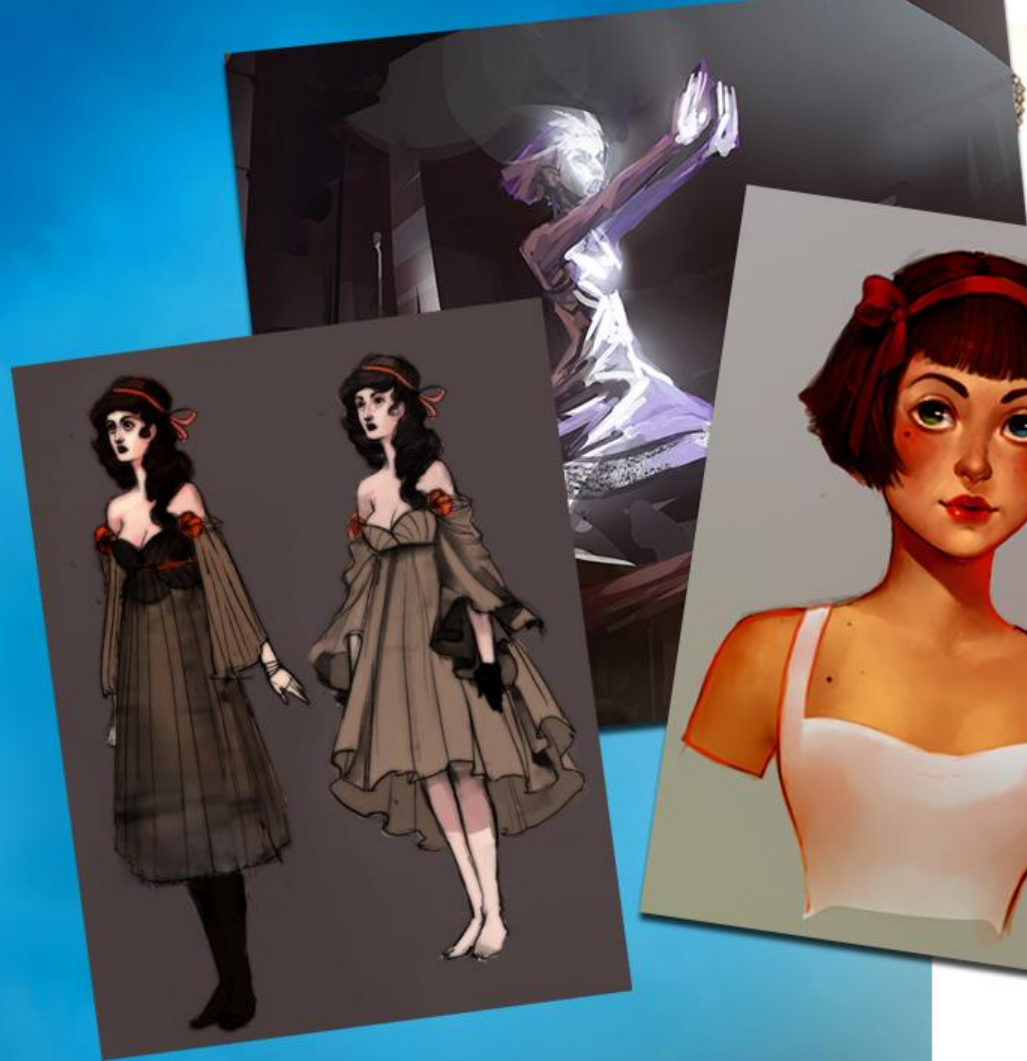




Gibson Girl

- Didn't fit our new setting...
- Now a talking character you had to empathize with...
- The player had to “want” to spend time with her...





Nightgown

- Too modern...
- Too plain, not iconic enough to be a main character...



Corset

- Multiple iterations on one design...
- Needed to take bigger steps, lose details from previous versions...
- Collaboration between concept artists and modelers...
- Introducing new technology...

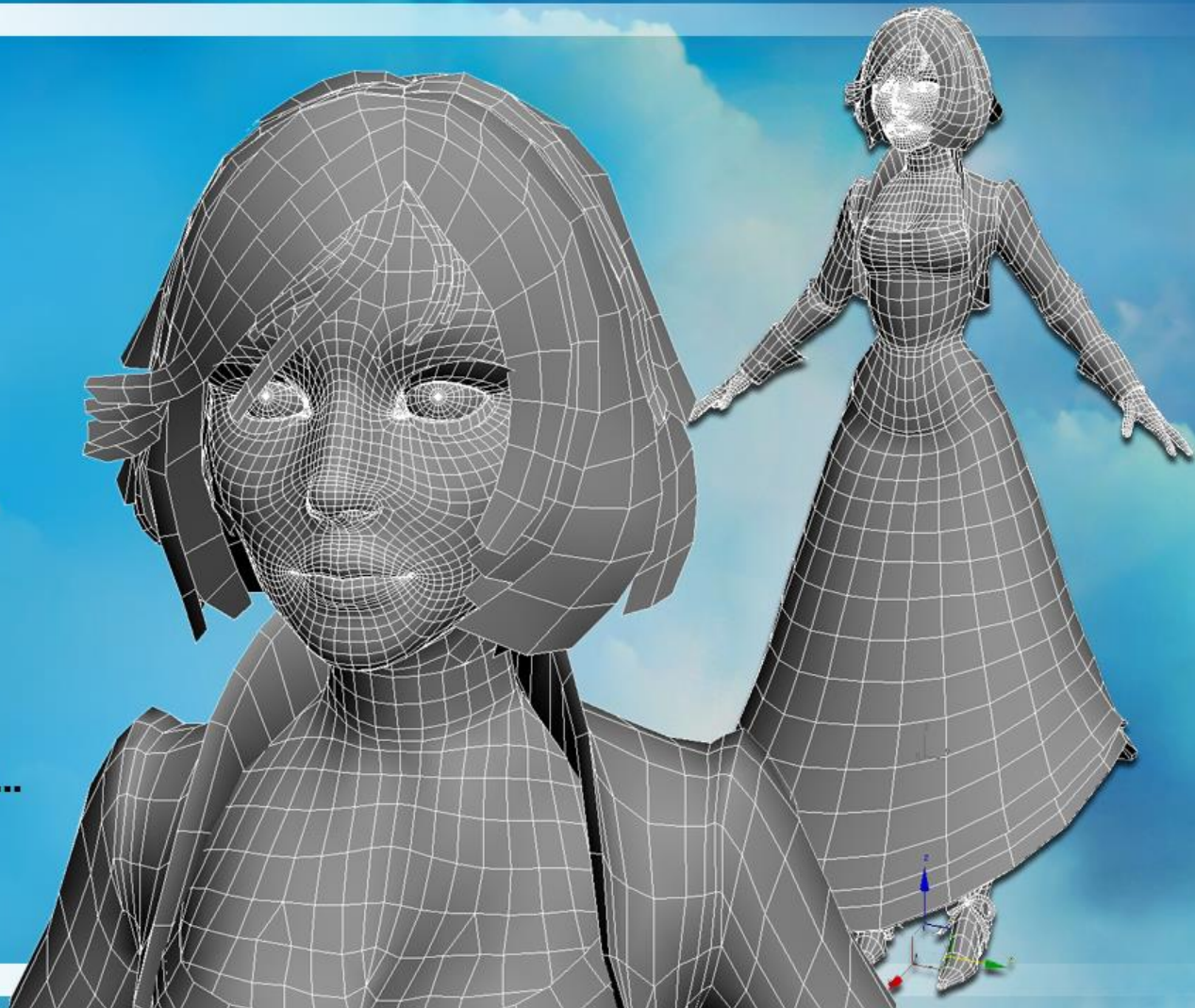


Demo #1: Public Announcement



Corset

- Final polish pass...
- Finalized Budget...
 - 20,000 triangles...
 - 7 Materials...
 - 135 Bones...
 - Cloth Sim...
 - Custom Shaders...





“Young” Elizabeth



“Young” Elizabeth

- Needed to show character development...



“Young” Elizabeth

- Needed to show character development...
- More variety for an asset you always see...
- Unappealing design / frumpy...
- A departure from the Elizabeth we were familiar with...



“Young” Elizabeth

- Outsourced an artist with a specific skill...
- Simplified version of a real world uniform...
- Bold color statements with significant surface detail...





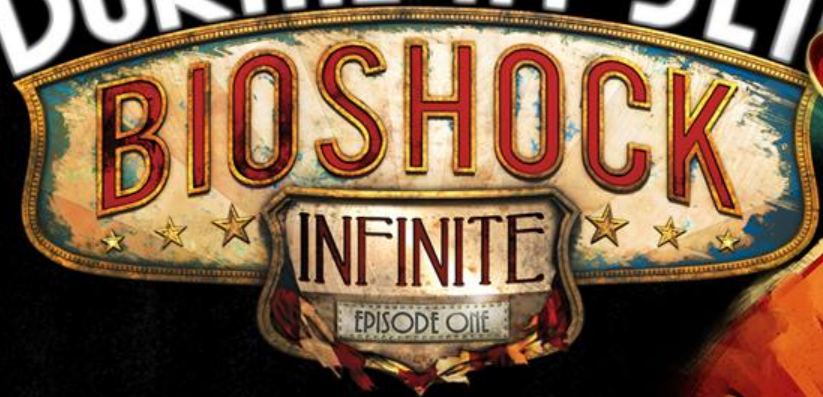
"NO JOBS TODAY"

THE EARLY BIRD CATCHETH THE WORM.

- COAL PORTER
- SHOVEL BOY
- GRAVELLER
- COAL BEARER
- TANK CLEANER
- MATCH DIFFER
- CROSSING SWEET
- SEWER BRICKER
- FIT MONKEY
- PROCESSOR
- MOTOR



BURIAL AT SEA





Femme Fatale

- Matched the story elements for Elizabeth...
- Not to the level of quality we expect in an Elizabeth asset...



Femme Fatale

- Complete redo....
- Collaboration with Creative Director, Concept, and Design...
- New makeup, clothing, addition of color...
- Fully Embracing “Femme Fatale” ...
- Iteration on the model, not spending time between concept and modeling...



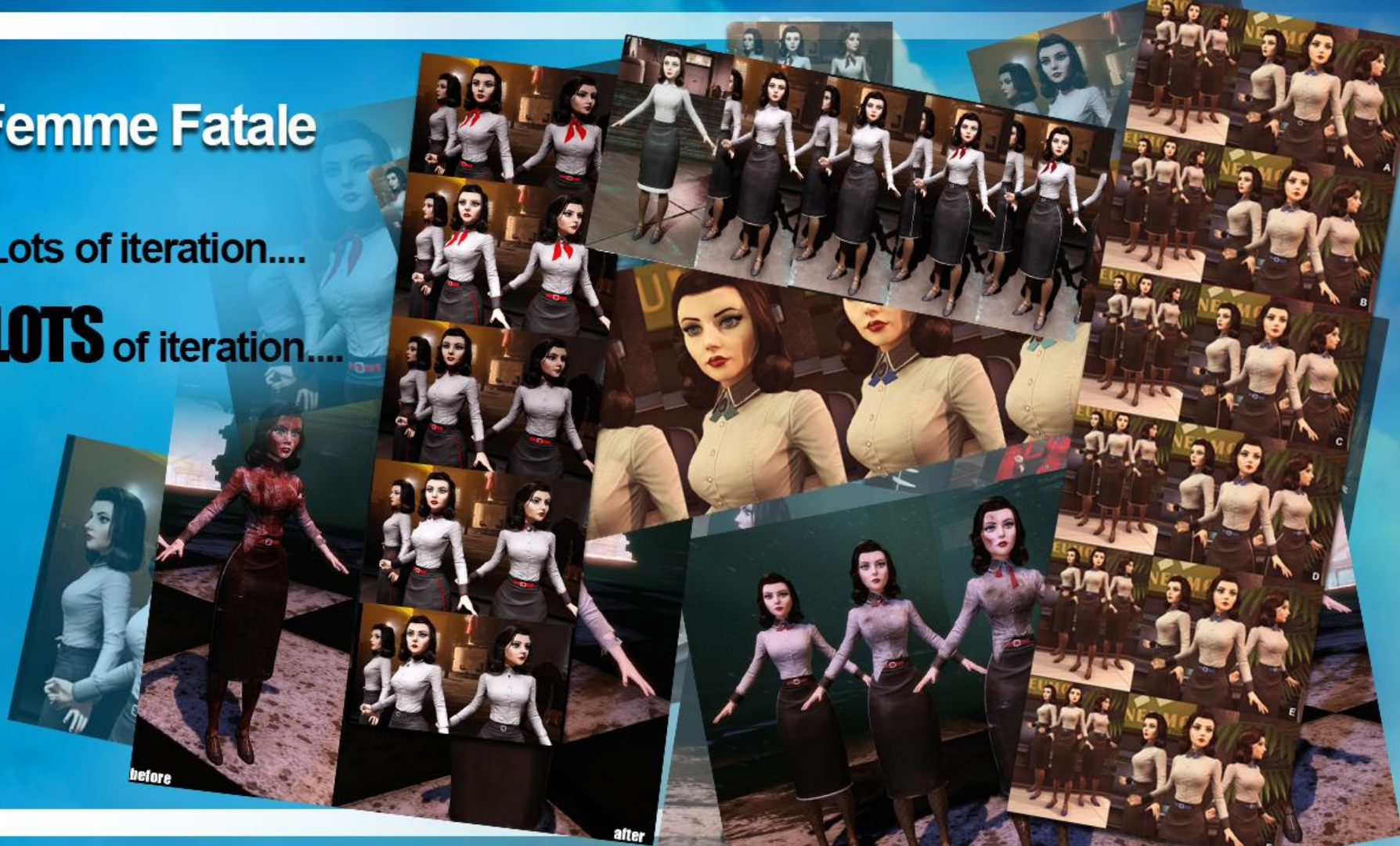
Femme Fatale

- Lots of iteration....



Femme Fatale

- Lots of iteration....
- **LOTS** of iteration....





Making Better Friends...



Making Better Friends...

As our art direction evolved, it required us to take a hard look at our general population and how they were fitting into our changing world. The result was a complete facelift, bringing our heavily stylized characters from an Art Nouveau setting to a more relateable, period appropriate look that you can see in the final game. Using examples that span over 4 years of development, I will show how changes such as these gave us more grounded characters in the world, a more repeatable population, and a more consistent art style.



Organic Growth

- Change Over Time effects Quality...
- Allowing changes for the greater good...
- Recreated or heavily modified every asset...
- Supported major change in environment art direction...



Organic Growth

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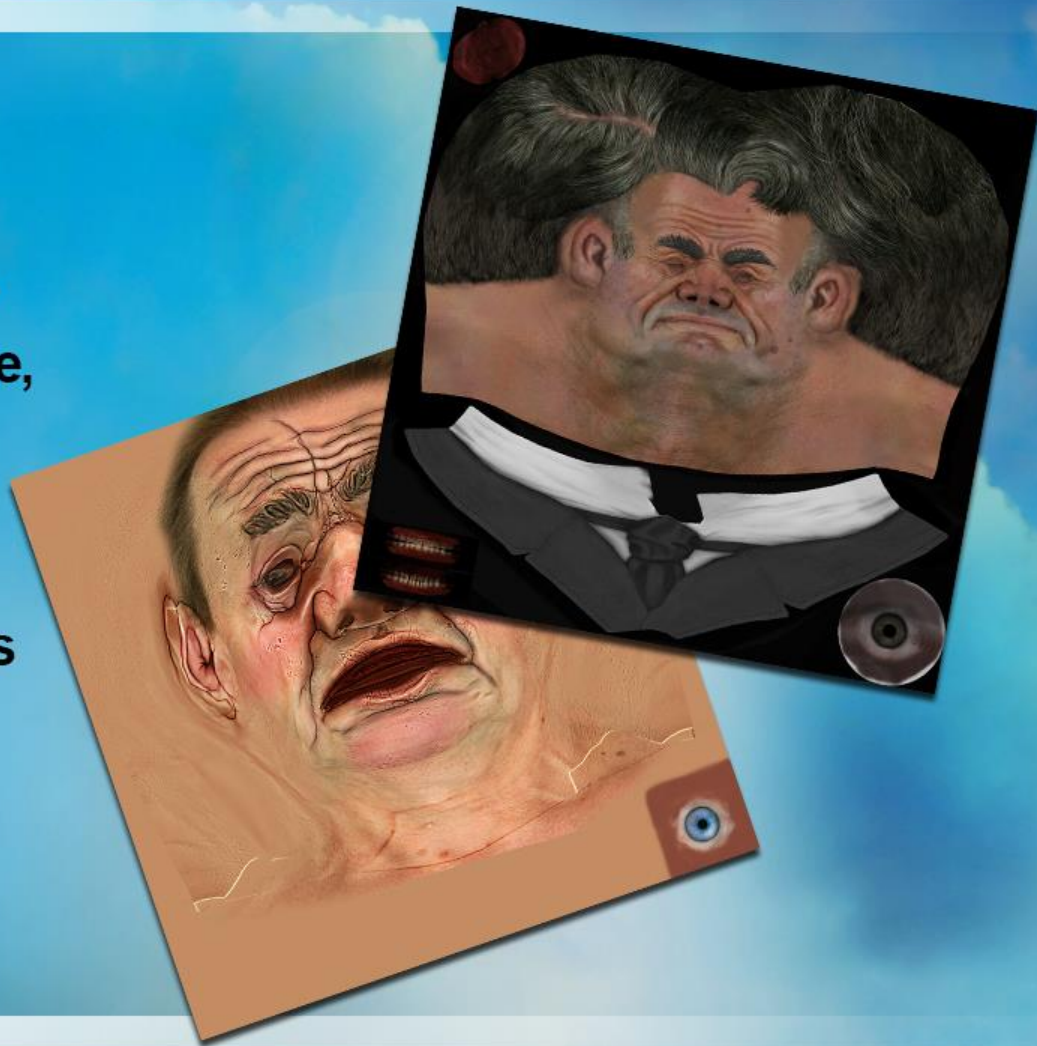
STYLIZED FACES

- Model and texture style no longer fit into our world...
- Character's resembled splicers rather than citizens...
- Too unique, obvious repetition



STYLIZED FACES

- Inconsistent polycount, number of bones, materials, cranium size, and weighting.
- No automation, all unique assets from scratch.



STYLIZED PROPORTIONS

- Proportions were unnatural.
- Textures were too painterly and muddy.
- Ill fitting clothes, not period appropriate.



STYLIZED PROPORTIONS

- Inconsistent construction leads to budget issues.
- Next to no shared assets.
- Texture randomization was ugly and hard to create.
- Patterns became too distracting in a crowd / hard to repeat.



PROGRESS

- Higher detailed sculpt and textures...
- More realistic proportions...
- Still too stylized, and inconsistent.







Consistency and Better Asset Management

- Introduction of a universal system...
- Shared topology...
- Shared UVs...
- Shared Facial Rig /
Automated Face Weighting...
- Standardization allowed for kitbashing...
- Similar quality levels and style throughout
the game...



Improved Workflow

- Higher quality assets...
- Quicker turnaround times...
- More time spent making art...



Chumps

- Regular AI models were too expensive...
- Needed a cheap solution to populate areas...
- Retroactively created assets...
- Quality Suffered...



Chumps

- The Town Center Strike Team...



Chumps

- The Town Center Strike Team...
- Quality Exemplar / Chumps became important...
- Preplanned “Group” assets created with modular pieces...
- Higher quality assets and easier to control...



Lutece Twins

- Original costume was too stuffy...
- Models were literally the same face but with a beard...
- Color scheme and detailing were too hard to read...
- Didn't stand out from the crowd as a special character...



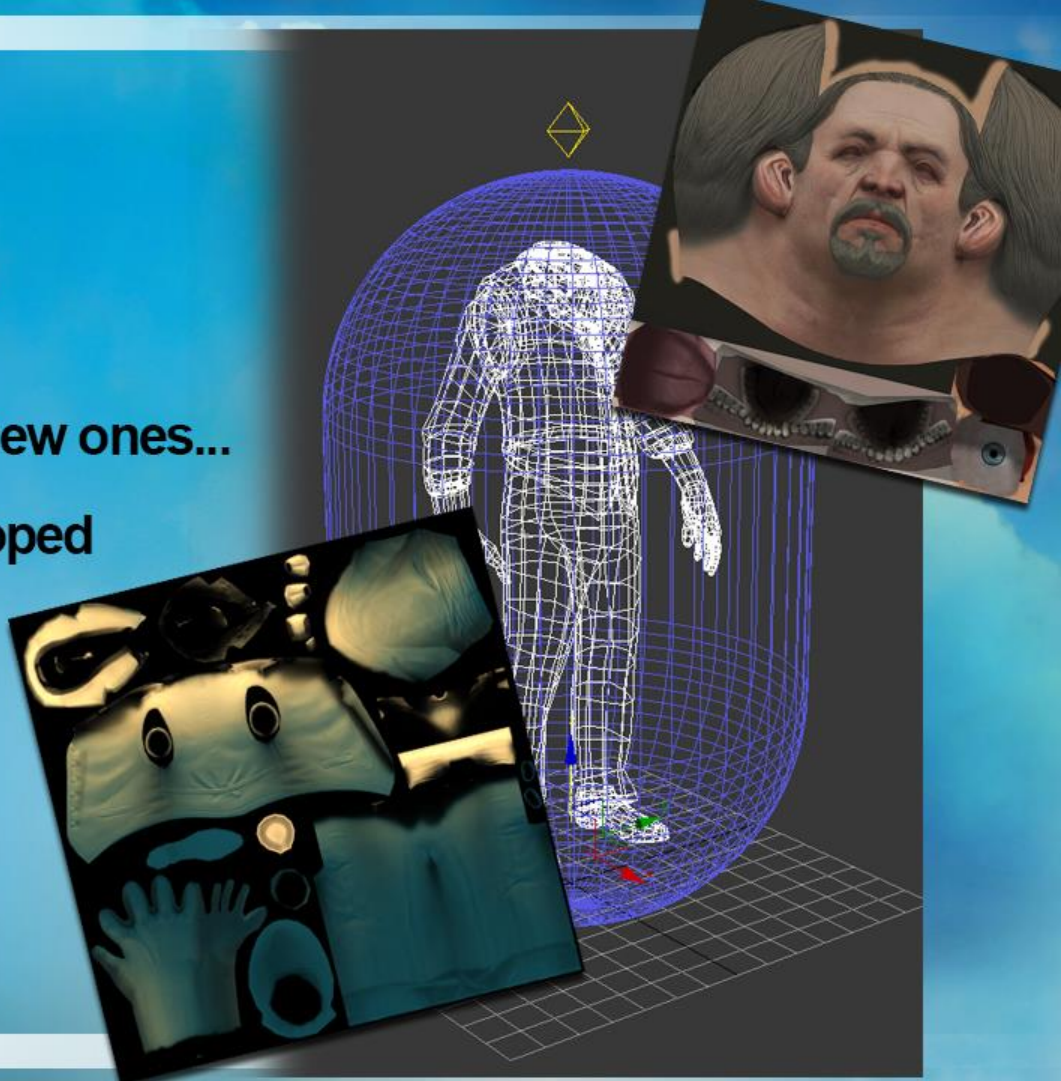
Lutece Twins

- Brought back Claire for a redesign...
- New outfit made bolder choices...
- More obvious similarities...



Scheduled Polish Time

- Protecting time at the end of the project for a final pass...
- Improving old assets to match new ones...
- Incorporating techniques developed later in production...











Making Bigger Enemies



Making Bigger Enemies

At Irrational, we greatly improved the appearance of our combat AI characters from BioShock 1 to BioShock Infinite. After collaborating with our designers, we were forced to rethink how we handle character art in a combat scenario. This often required new models, re-evaluating silhouette, the importance of colour between factions, and a tiered armor system unique to BioShock Infinite.



Beta/Gamma
MALE
SPICERS
4 DRESS
TYPES



open coat



Boxy
coat



Vest



NARROW
WAISTED LONG JACKET



1.



2.



3.



4.

BioShock Infinite Combat

- Roles clearly defined...
- Factions at War...
- Citizens...
- Increased Difficulty...
- Huge Arenas...
- Shared Rigs and proportions...



Original Combat Assets

- What we did on BioShock...
- Anyone can be anything...
- Citizens...
- Undefined threats...



- Hard to author...



Override System

- At spawner level...
- True Randomization...
- Allow racial difference...
- Easier to make swooping changes...
- Memory issues...



WRONG BOX!

Box is not FULLY BUILT

Boxes are NOT VALID. AIs WILL NOT MOVE. Check Map For Errors!

Box 100% Synapse Max Traversal Delay: 24.0



Defining Threats

- Needed a military force...
- Uniforms stand out...
- Unique headsets..



A Second Faction

- Who are they?
- Arming the rebellion...
- Stand out from the working class..
- Visual cues...



Final Combat Models

- The Crunch Push...
- Creating tiers...
- Adding attachments..
- Shared top tier models...





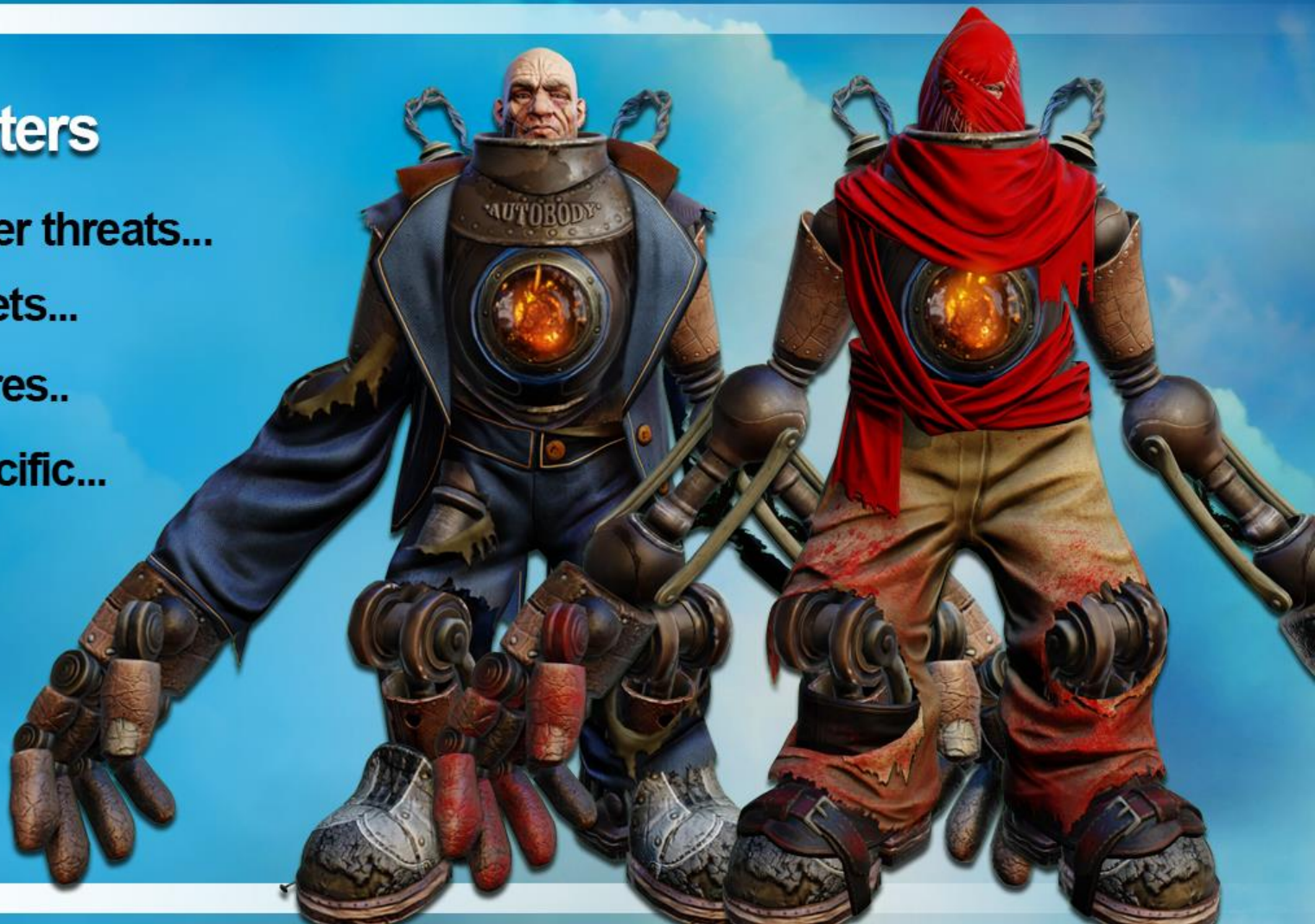
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Heavy Hitters

- Clearly bigger threats...
- Unique Assets...
- Action Figures..
- Faction Specific...



Dinosaur Chart

- Clear Hierarchy...
- Easy to visualize...









COLUMBIA

DAILY DOCKING SCHEDULE

ARRIVAL TIMES	DEPARTURE TIMES
9:00 AM	9:00 AM
10:00 PM	10:00 PM
11:00 PM	11:00 PM
12:00 PM	12:00 PM
1:00 PM	1:00 PM
2:00 PM	2:00 PM
3:00 PM	3:00 PM
4:00 PM	4:00 PM
5:00 PM	5:00 PM
6:00 PM	6:00 PM
7:00 PM	7:00 PM

ROBERT & SON
16K

Lessons Learned and Key Takeaways

- Cut work isn't always wasted work.**
- Making games is a team sport.**
- Quality changes over time.**
- Great ideas can happen naturally.**

Questions?



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