SNO

SUPER NINTENDO ONLINE

Milestone 6

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Milestone 6

	% Complete	Michael K.	Keith J.	Eric W.
Performance	100%	33%	34%	33%
Polish	100%	33%	34%	33%
Demo Video	100%	33%	34%	33%
User Manual	100%	33%	34%	33%

Graphics Caching

- Observer monitors memory
- When graphics data changes, update cache
- Caches tile data and graphical data
- Colors cached
  - SNES 15-bit BGR: bbbbbgggggrrrrr
  - Java 32-bit ARGB: aaaaaaaarrrrrrrrggggggggbbbbbbbb

Mode 7

- Matrix Equation maps screen pixel to tilemap pixel
- X/Y = Pixel on tilemap
- SX/SY = Pixel on screen

$$\begin{bmatrix} X \\ Y \end{bmatrix} = \begin{bmatrix} A & B \\ C & D \end{bmatrix} \begin{bmatrix} SX + M7HOFS - CX \\ SY + M7VOFS - CY \end{bmatrix} + \begin{bmatrix} CX \\ CY \end{bmatrix}$$

Demo

Lessons Learned

- Unit tests save lives
- Documentation is great when it's right
  - Not always right (even when official)
- Precise timing is difficult
- Super Nintendo is complex and unintuitive

Questions?