

# augmented adventure

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A TABLETOP GAME IN AUGMENTED REALITY

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**HOST A GAME**

**JOIN A GAME**

**OPTIONS**

# Overview

Mobile App for Android Systems

Multiplayer Role Playing Game in  
Augmented Reality

One to four players

Artstyle inspired by early 3D games

augmented  
adventure

AR ROLE-PLAYING GAME



A GAME BY SEMAPHORE  SOFT

# Inspiration

D&D Map Maker

RPG App

Dungeons and Dragons

Betrayal at the House on the Hill

Earthbound



# Building a World

Players

Dungeon Building

Enemy Behavior

Gameplay



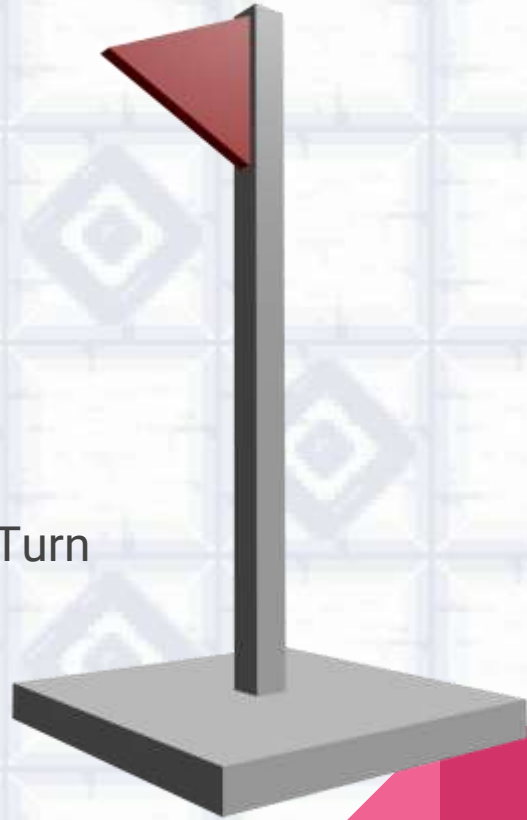
# Players

Waypoint Marker

Room Association

Dungeon Traversal

Must Attack/Defend/Use Item/Special to End Turn



# Dungeon Rooms

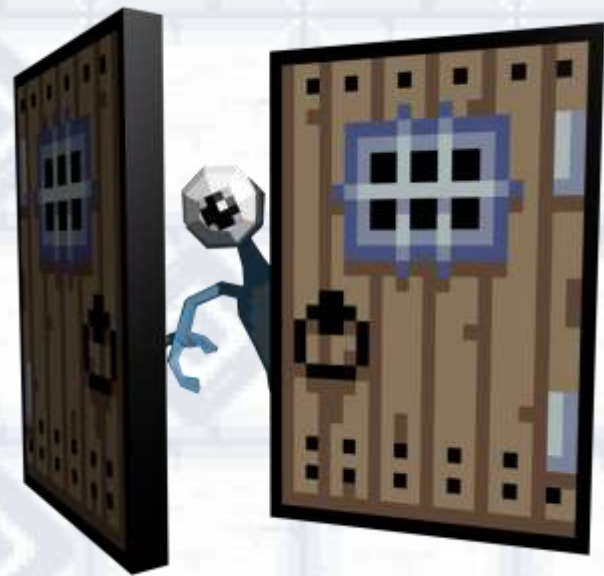
Attached to a Marker

Connected by Doors

Square Grid

Valid Adjacency

Unlimited Accommodation of Players and Enemies



# Enemies

Generate in Rooms

Take Turns like Players

Different Enemies have Different Behaviors

May drop items upon defeat





# Game Flow

Player Marker Selection

Start Room Generation

Open Doors - Place Additional Rooms

Take Turns Moving and Acting

Fight Encountered Enemies

Continue Until Boss Encounter



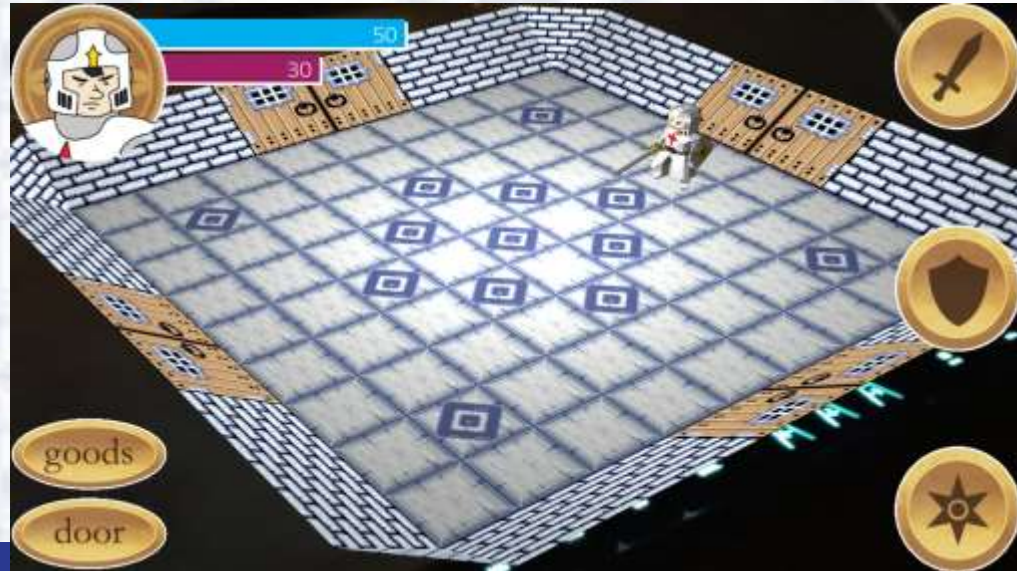
# User Interface

Interactive Elements Overlaid on Camera Feed

Goal: Clean Interface, Easy-to-Use and Attractive

Minimize Button Clicks for  
Hassle-Free Navigation

Minimal UI to Maximize Feed Area



# The Art of War - 2D edition

Concept art drawn in Photoshop or by hand

Textures made in Microsoft Paint

Character design influenced by 16-bit  
role playing games



# The Art of War - 3D Edition

Done in Blender

Modeling low-poly

Pose to pose, not animated

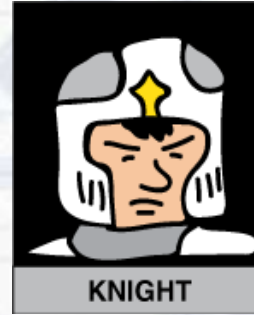


# 2's Company, 3's a Crowd, and 4's a Party

Networking

Connects over WiFi

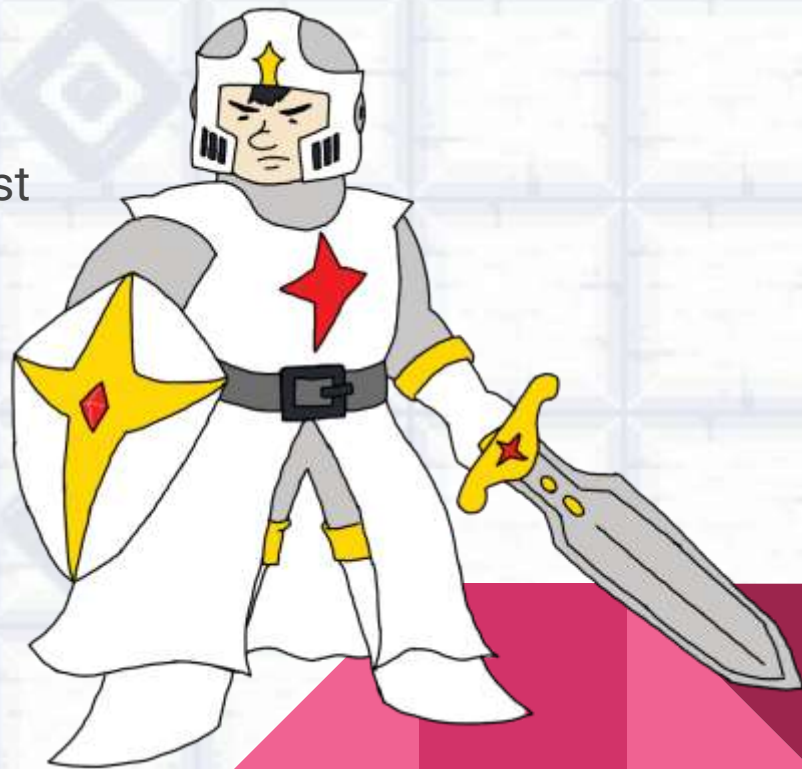
Send messages to all or a specific client



# Host-Client Relationship

Host manages all gamestate data

Client sends requests to be validated by the host



# Network Services

Use `BoundServices` to communicate with network threads

Allows the same network connection to be used in multiple activities

More control over service lifecycle

# Program Design

Modularity - Easily Interchangeable Assets

XML Files

Fault Tolerance

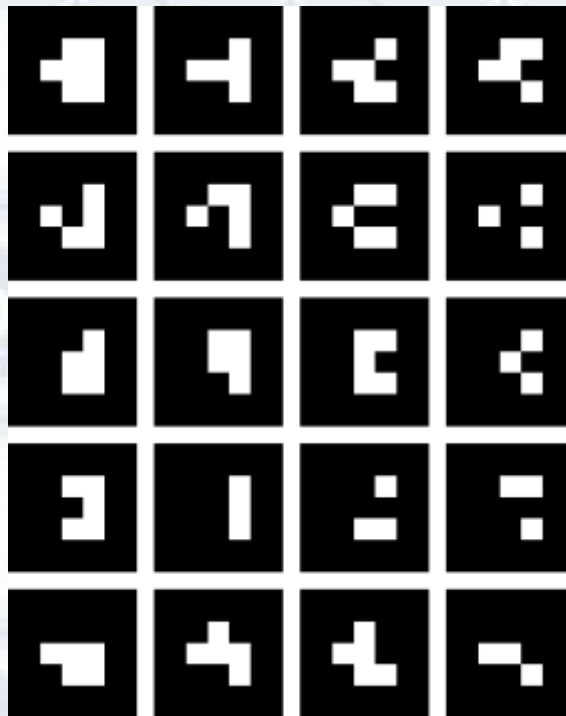


# ARTOOLKIT

Camera Feed

Marker Detection

Transformation Matrix



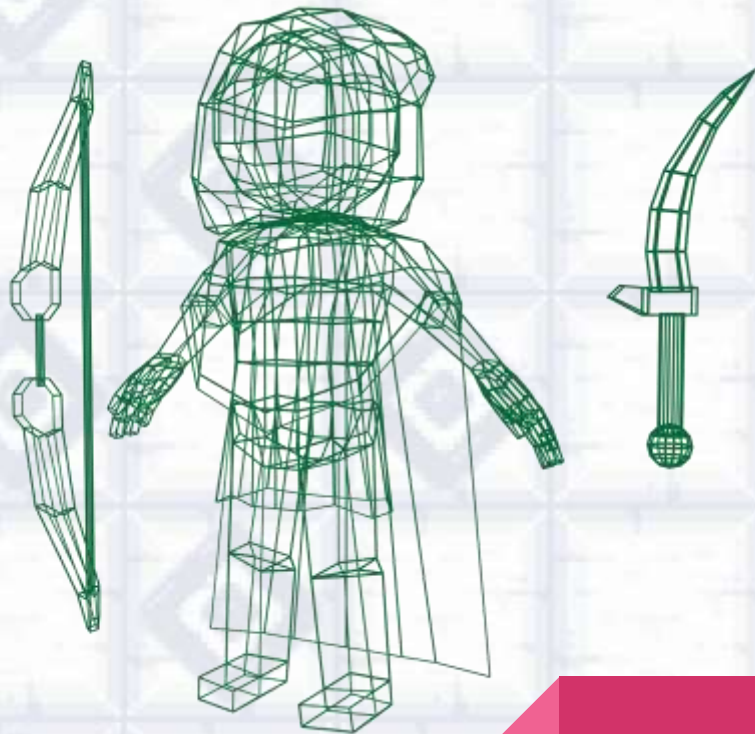


OBJ Files

Indexed (Vertex) Buffer Objects

Transformation Matrix

GLSL Shaders





# Special Thanks

Kenneth Madsen and Kenneth McClure - Matrix Manipulation and Math Advice

Alex Fox - Additional Playtesting

James Ward - Inspiration

Kevin MacLeod - Music (“Overworld”)

**Q & A**

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