

ICE*MO*BILE

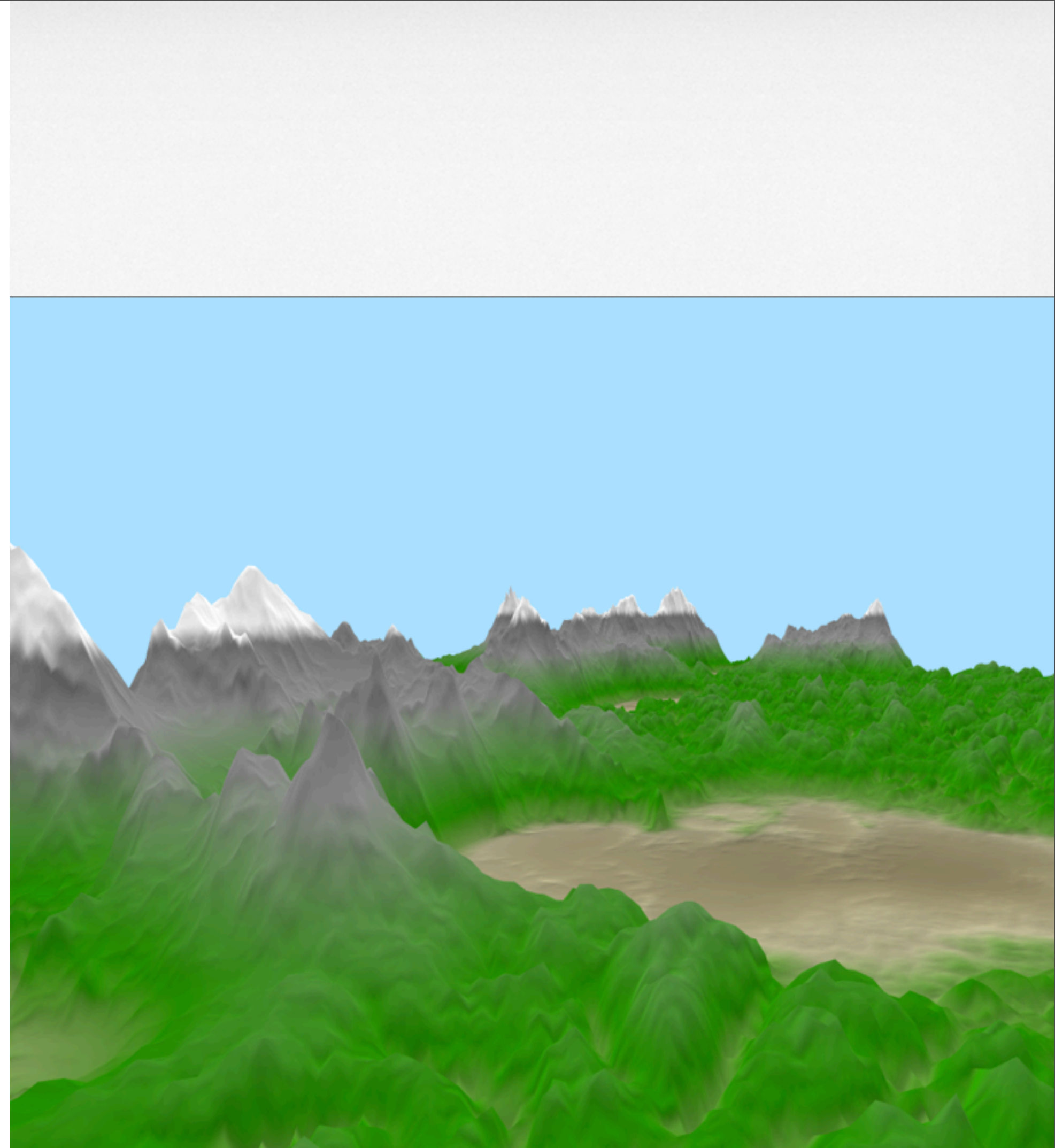
Developer challenge kickoff (Q&A)

Battle RoyAle

Agenda

- Why?
- Goals?
- How does it work?
- What are the (game) rules?
- What are the technical specs?
- How do I participate?
- Final battle, when?
- I've this great idea, now what?

(Q&A)



Why?

- Do something else
- Get out of the 'comfort zone'
- Fun
- Trigger people
- Step towards interesting projects (hopefully)




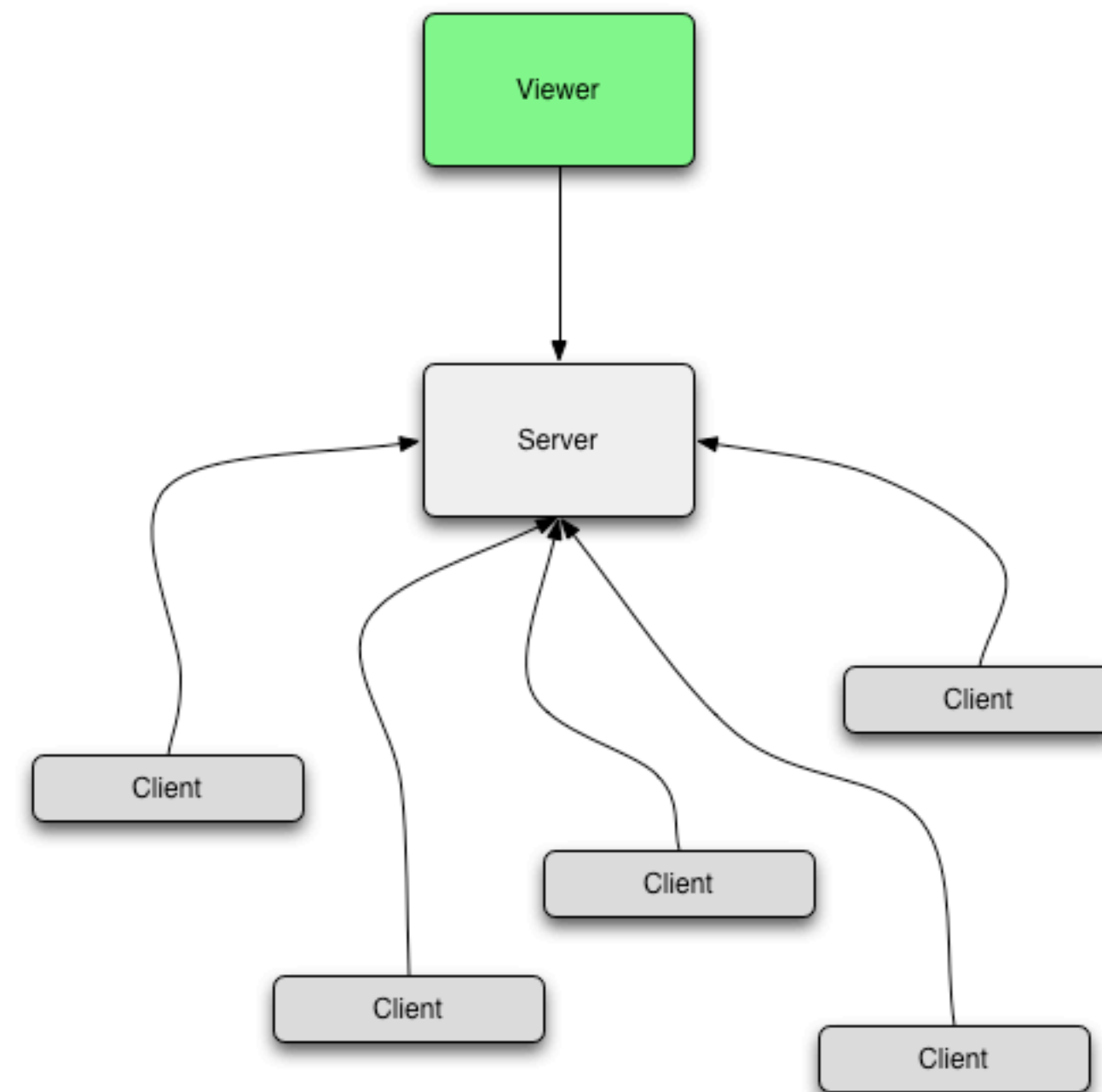
Goals?

- Easy accessible
- Communication interface should be clean
- Make people enthusiastic
- (Again) trigger people



How does it work?

- Client/Server based game
Write an autonomous operating client (bot)
- Server controls the game
- Random generated world
- Clients control their own tank
- Multiple clients will participate in the same battle
-  Score points by hitting/disabling other players



What are the game rules?

- Fixed set of rules
- Server will determine and communicate the parameters
- Rules as defined now:
 - Move Speed (10 units per second)
 - Rotation Speed (45 degrees per second)
 - Turret Rotation Speed (35 degrees per second)
 - Client State Update Interval (5 times a second)
 - Fire Interval (2.0 seconds)
 - Ballistics Travel Speed (150 units)
 - Ballistics Damage (20 units)
 - Field of View (80 degrees)
 - Turret Field of View (60 degrees)
 - Hit Points (100 units)
 - Enemy Hit Score (10 points)
 - Enemy Kill Score (50 points)
 - **Suggestions..?**

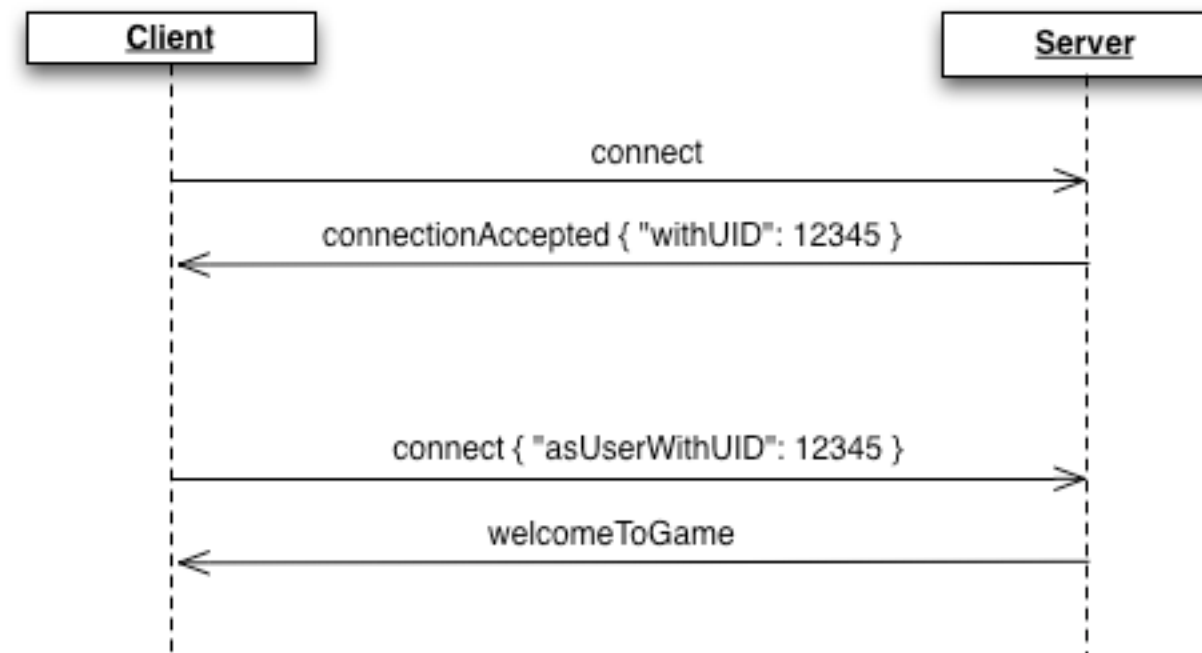


What are the technical specs?

- Communications is done by sockets
 - Clients sets up two communication channels
 - Send welcome message
 - Use client UID to setup server to client channel
- Messages are JSON encoded
 - Termination by ‘\n’ character
 - One message, one line, easy parsing
- Server will send client state updates with a fixed interval



Setting up two channel communication



Server to client messages

```
// Server to client welcome message
{
  "welcomeToGame": {
    "withState": "lobby",
    "rules": {
      "moveSpeed": 10,
      "rotationSpeed": 45,
      "turretRotationSpeed": 35,
      "fireInterval": 2,
      "ballisticTravelSpeed": 150,
      "fieldOfView": 90,
      "turretFieldOfView": 45,
      "hp": 100,
      "ballisticDamage": 20,
      "enemyHitScore": 10,
      "enemyKillScore": 50,
    },
    "currentPlayers": [
      "Achmed",
      "Bartol",
      "Borre",
      "Bruno",
      "...",
    ]
  }
}

// Server to client game start notification
{
  "gameWillStart": {
    "in": 3,
    "withPlayers": [
      "Achmed",
      "Bartol",
      "Borre",
      "Bruno",
    ],
    "onMap": {
      "withSize": [
        1024,
        1024
      ]
    },
    "havingObstacles": [
      {
        "id": 1,
        "type": "mountain",
        "size": [
          32,
          32
        ]
      }
    ]
  }
}
```



Client to Server messages

```
// Connect client channel socket
{
  "connect": {
    "asUser": "[username]",
    "withTankColor": "255,0,0"
  }
}

// Connect server channel socket
{
  "connect": {
    "asUserWithUID": 14326,
  }
}

{
  "moveForwardWithSpeed": 1.0 // [0.0 - 1.0]
}

{
  "moveBackwardWithSpeed": 0.5 // [0.0 - 1.0]
}

{
  "moveWithSpeed": -0.75 // [-1.0 - 1.0]
}

{
  "rotateTank": 60.0 // [-359.0 - 359.0]
}

{
  "rotateTurret": -60.0 // [-359.0 - 359.0]
}

{
  "stop": "tankRotation" // ["tankRotation", "turretRotation", "moving", "scanning"]
}

// Server Response
{
  "ack": "moveForwardWithSpeed"
}
```



How do I participate?

- Let me know you're in
- Write your client
- Server/viewer will be made available
- Expect some updates
- Final battle begin of April



Final battle when?

- There will be one or two ‘test rounds’
- The final battle during a FriMiBo presentation
- There will be a prize (hoorays!)



I've a great idea, now what? (Q&A)

Do tell

