AGI15 Calendar: [link](#)

- Mon 31 aug 15:00-17:00
- Tue 1 sep 13:00-17:00
- Mon 7 sep 15:00-17:00
- Thu 10 sep 10:00-12:00
- Mon 14 sep 15:00-17:00
- Thu 17 sep 10:00-12:00
- Tue 22 sep 10:00-12:00
- Fri 25 sep 8:00-16:00
- Mon 28 sep 15:00-17:00
- Mon 5 oct 15:00-17:00
- Mon 12 oct 15:00-17:00
- Fri 30 oct 9:00 – Sun 1 Nov 16:00
- Mon 2 nov 15:00-17:00
- Tue 3 nov 13:00-17:00
- Tue 10 nov 10:00-12:00
- Tue 17 nov 10:00-12:00
- Tue 24 nov 10:00-12:00
- Tue 1 dec 10:00-12:00
- Fri 4 dec 15:00-19:00

<table>
<thead>
<tr>
<th>Lecture Date</th>
<th>Lecture Title</th>
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<tbody>
<tr>
<td>31 aug 15:00-17:00</td>
<td>Introduction</td>
</tr>
<tr>
<td>1 sep 13:00-17:00</td>
<td>Lecture 2-3: Forming Groups and Brainstorming</td>
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<tr>
<td>7 sep 15:00-17:00</td>
<td>Lecture 4: Proposals</td>
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<td>10 sep 10:00-12:00</td>
<td>Lecture 5: Discussion based on Proposals</td>
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<tr>
<td>14 sep 15:00-17:00</td>
<td>Lecture 6: Hello World Demos</td>
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<tr>
<td>17 sep 10:00-12:00</td>
<td>Lecture 7: Discussion based on the Hello World Demos</td>
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<tr>
<td>22 sep 10:00-12:00</td>
<td>Lecture 8: Preparing ForskarFredag 2015</td>
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<tr>
<td>25 sep 8:00-16:00</td>
<td>ForskarFredag</td>
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<td>28 sep 15:00-17:00</td>
<td>Lecture 9: Reflecting on ForskarFredag</td>
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<td>5 oct 15:00-17:00</td>
<td>Lecture 10: Agile Development 1 towards Comic Con Gamex 2015</td>
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<tr>
<td>12 oct 15:00-17:00</td>
<td>Lecture 11: Agile Development 2 towards Comic Con Gamex 2015</td>
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<tr>
<td>30 oct 9:00 – Sun 1 Nov 16:00</td>
<td>Comic Con Gamex</td>
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<td>2 nov 15:00-17:00</td>
<td>Lecture 12: Reflecting on Comic Con Gamex</td>
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<tr>
<td>3 nov 13:00-17:00</td>
<td>Lecture 13-14: Forming new groups and brainstorming project 2</td>
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<td>10 nov 10:00-12:00</td>
<td>Lecture 15: Proposals Project 2</td>
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<tr>
<td>17 nov 10:00-12:00</td>
<td>Lecture 16: Hello World Demos for Project 2</td>
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<tr>
<td>24 nov 10:00-12:00</td>
<td>Lecture 17: Agile Development 1 for Open House</td>
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<tr>
<td>1 dec 10:00-12:00</td>
<td>Lecture 18: Agile Development 2 for Open House</td>
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<tr>
<td>4 dec 15:00-19:00</td>
<td>VIC AGI15 Open House</td>
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</table>

2015/10/12 AGI15 - L11
Agenda

1. Logistics Comic Con Gamex
   1. Schedule
   2. Space
   3. Content
   4. Equipment
   5. Trip
2. Work plans
   1. Group
   2. Individual
3. Word from Henrik
4. Agile Development
   1. MadSand
   2. BrARwl
   3. Blopper
   4. Shmoonning
   5. TeamTris
   6. Padawan 101
5. Schedule individual meetings
   1. MadSand
   2. BrARwl
   3. Blopper
   4. Shmoonning
   5. TeamTris – Oct 21 13:00 – 14:00
   6. Padawan 101

2015/10/12
Friends Arena

2015/10/12
<table>
<thead>
<tr>
<th>Pocap</th>
<th>That</th>
<th>Isbit</th>
<th>Games</th>
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<tr>
<td>brain</td>
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</tbody>
</table>
Remember: Deliverable Oct 23

- Webpage with:
  - Description
  - Goal and motivation of the project
  - Explanation and Justification of the graphics and interaction technologies used and developed
  - Challenges
  - Obstacles
  - Related work
  - Lessons learned
- Look at [AGI14 web pages](#)
- Photos
- "Making of" documentary (2 minutes)
- Demo Reel (30 seconds)
- Optional PR material (logo, trailer, flyers, posters, catalog)
- User testimonials (what did people say)
Task

1. Next phase development (quickly fix interaction problems and focus on advancing the graphics)
   1. Special Effects
      1. Particle Systems
      2. Mathematically model simulations of light interacting with complex objects ...
   2. Rendering quality
      1. Un-Aliasing
      2. Shadows
      3. Reflections
      4. Refractions

2. Focus on your own goals
   1. Make feature that is:
      1. Non-critical
      2. Independent
      3. Focused on your learning goal
      4. Easily integrated
What to deliver?

• Freedom to fail
• Show work
  – Research
  – Paper reading and understanding
  – Development
  – Integration
• Write a short individual report (?)
  – At most
    • 1000 words
    • 3 references
    • 3 figures
    • 1 video-figure
• If working, working code
Ahead of you

• Phase 1 – fix interaction issues and work on core graphics together
• Phase 2 – research and propose a feature that works independently from the rest of the project and implement a simple version of it.
Example work plans from AGI14

• The following are plans made between ForskarFredag and Comic Con…
2Pacs
Gameplay

- Gameplay encapsulates tree pipeline
- search-for-player loop
- Cinematic tour of the forest while waiting

Input
- Input separated from Interaction
- Abstract Input Interface
  - KeyboardHelper
  - KinectHelper

Tree Generation
- Interaction is handled here
- Abstract representation of the tree
  - Tree Data
    - id
    - child
    - position, rotation, scale
    - age, depth
    - leaves, flowers, lateral buds
    - not rendering specific
      - no vertices, faces, normals
      - no colors
      - no shaders

Simulation
- Apply physics simulations
- Store in separate SimulationData structure.
- Wind, Gravity ...
- Also other systems:
  - Leaves in air
  - Particle Systems
  - Day-night cycle

Tree Construction
- Creates full tree model
- Ready for rendering
- Data to GPU

Rendering
- Tree ready to be rendered
- Deferred Rendering Pipeline
  - First pass: gBuffer (positions, normals, materials)
  - Second pass: fragment shader using data in gBuffer
- NPR - Non Photorealistic Rendering
- Lots of things to add:
  - DoF
  - Motion blur
  - Anti-aliasing
  - Volumetric light scattering
  - Bloom effects
  - Godrays
  - ...
Pod Racer

• Focus on the graphics
  – Fire
  – Electricity
  – Dust
  – Pseudo-realism
  – Advanced effects
  – Avatar with arms controlling the pod
  – Visualization of engine thrust
  – Map?
  – Virtual arrows?

• Sound
  – Location?
  – Special effects
  – Sound track
    • Expert: Roberto Bresin
  – You may justify spending time on good sound by calling it “advanced interaction” but I will not force you to do it.

• Change track
• In-game tutorial
Space Survival

- Controls
  - Hard
  - Confusing
  - Vertical thrusters
- In-game tutorial
- Self-localization
  - Map?
  - Virtual Arrows?
  - On avatar’s body?!
- Space dust – speed and direction
- Look at 3D movie creation – layering
- Sound in helmet
  - Sonification
  - Early warning
  - Communication with ground control, mission command, or space craft
<table>
<thead>
<tr>
<th><strong>MAD SAND</strong></th>
<th><strong>B R I T H W L</strong></th>
<th><strong>B L O P P E R</strong></th>
<th><strong>S I M S O N I N G</strong></th>
<th><strong>T E A M T R I S</strong></th>
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<td>BOX/AUDIO/UX</td>
<td>ENEMIES/CHARS</td>
<td>MODEL POWER UPS</td>
<td>REALISM</td>
<td>2 CANS</td>
<td>GAME - AMY</td>
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<tr>
<td>X-BOX CONTROL</td>
<td>ALIEN MODEL</td>
<td>1 CHARACTER MODE</td>
<td>ALIEN 2 FLYING</td>
<td>ALIEN 2</td>
<td>GAME OVER -</td>
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<tr>
<td>UX</td>
<td>W I I</td>
<td>(4 TOTAL)</td>
<td>MEDIUM</td>
<td>MEDIUM</td>
<td>NETWORK (3RD?)</td>
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<td>GAME-OVER</td>
<td>VITALS</td>
<td>METEOR/SHOOTING</td>
<td>SHOOTING MODE</td>
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<td>PHONE VS. HAP</td>
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<td>MENU</td>
<td>MODEL POWER UPS</td>
<td>3D SOUND</td>
<td>ANIMATION</td>
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<td>MODEL LUKE</td>
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<td>PARTICLE SYS</td>
<td>FIX FLUSHES</td>
<td>PROPER DUNNS</td>
<td>REALISM</td>
<td>2 CANS</td>
<td>BASIC HAPICS</td>
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<td>CANDY</td>
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<td>SOUNDFX</td>
<td>ALIEN 2 FLYING</td>
<td>ALIEN 2</td>
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<td>MODELS FOR</td>
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<td>L Location</td>
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<td>MEDIUM</td>
<td>UP LEADER BOARD</td>
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<td>LINE TIME</td>
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- NPR
- NON-PHYSICAL
- REALISM
- ALIEN MODEL
- 3D JOBT
- 2 CANS
- 2 SCREENS
- MAKE HAPITS
- 1 SCREEN
- 11 - OCCULSION
- GAME - AMY
- 1 SCREEN
- FOCUS + CONTEXT
- SHOOTING MODE
- RESTORING
- 2 SOUNDS
- 3D SOUNDS
- SHOOTING MODE
Thank you!

marior@kth.se