URO
Final Chapter

I. Final State

Here we give a short overview of the elements of the game, together with some insightful screenshots.

First thing off, the main idea: to play tag, but with some interesting additions. The concept has evolved during the development phase, also between the alpha release and the final presentation. One thing which remained constant is that the game is based on rounds, which have this basic structure:

- a round lasts for a certain amount of time, to be decided by the players through the settings menu;
- the score system is based on points, so that meaningful action performed by the players give them a certain amount of points, and the one with most points at the end of the round, wins.

At the moment, our game features:

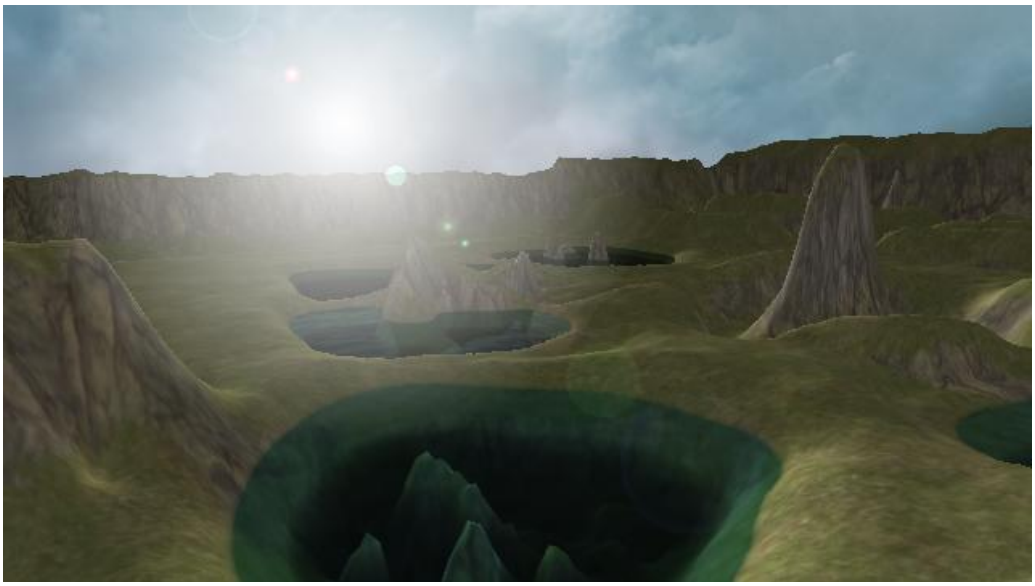
1. **Arena**

It resembles an outdoor, natural environment, with:

- Hills, part of the terrain

- Trees

- Water lakes, featuring reflection and refraction maps



- Mayan ruins, acting as obstacles for the players to avoid

and most prominently,

- Two Pyramids, located on opposite corners of the arena

The pyramid's roofs serve as starting points (as well reset points) for the players.

2. **Two Players**

The game is of a runner/catcher kind. Consequently, the roles of each player are:

- Runner: wanders through the arena trying to locate and touch checkpoints; moreover he gets points if he remain close to the Catcher;
- Catcher: follows the Runner and tries to enclose him in an energy shield.

3. **Checkpoints**

Specific points on the map, through which the Runner is supposed to... run, in order to collect points. They are surrounded by a moving, golden trail, which should make them easily recognizable.

4. **Powerups**

Objects, spread through the arena, which the players can collect, store and eventually trigger. They confer them some special abilities, namely:

- Cubify: turns the opponent into a cube, modifying his physical behaviour for short amount of time;
- Rocket Jump: performs a jump whose length is dependent on the current speed of the player;
- Mines: deploys a mine on the ground, which explode after a short time.

Screenshots of the game in action:
Round start

Capture event

Role switch

Final screen

II. Main changes from Alpha Release

Gameplay

1) Roles switch: whenever a "catch" happens (the Catcher captures the Runner within the shield), the roles of the player are switched; to give the new Runner the possibility to evade, the new Catcher is freezed for a short amount of time;

2) Check points: the Runner can now gain huge amount of points by passing through various checkpoints, located in some crucial points of the arena; not all of the checkpoints are available at the same time, though;

3) Point-o-meter: a new, intuitive way to visualize points, giving an immediate clue of who's ahead and who's trailing (as Blackrock guys suggested);

4) Hints: during the loading screen some general tips are displayed; during gameplay, hints suggest what the players should do in specific and crucial situations (i.e. players getting close or role switch).

Graphics

1) Arrows pointing at the opponent and a square precisely targeting him;

2) Environment models: new models were added to add more variability and "character" to the arena (as Blackrock guys suggested);

3) Menu: new startup screen, new settings menu, revision of rules and controls menu;

4) HUD: the powerups are now always visible in the lower left corner of each viewport; Point-o-Meter introduced (see above);

5) Water: a simple water surface covers the deepest parts of the arena, forming some small lakes (see above).

III. Personal Impression

The course met our expectations. We have a non-perfect-but-playable and hopefully enjoyable game which we are proud of. We gained very significant experience from the game course, both technical and team-collaboration.

Initial Idea

The initial design idea matches the final game only partly, as the game logic was undergoing continuous change during the development process. One of the few thing which remained unchanged was the Catcher role. Opposite to the initial idea, the arena is no more located on top of a pyramid, but just on a terrain. Moreover the Runner has now a different main goal, that is collecting checkpoints.

Project Structure and Schedule

If we had more time, the result would certainly be much better, but the schedule was not too tight.
All elements of the project structure contributed in a positive way, as they showed us the week and strong sides of our game. Especially playtesting session was extremely helpful. On the other hand the prototype was much less useful, with respect to the time-spent/lessons-learned ratio, as we would have detected the same issues as soon as we would have started development. Due to significant changes in the game logic, the development schedule had to change too. The initial "planning phase" was helpful only in the sense of introducing some sort of task separation. For example we had to pull out any AI plans and to redistribute the tasks among the team members.

What was the biggest technical difficulty during the project?

- Physics: we spent lots of time writing our own physics engine, but then gave up and used BEPU Physics;
- Creation of content: as nobody of us had any artistic skills, creation of content took very long time;
- Performance: due to Garbage Collector or just bad coding style :)

What was your impression of working with the theme? Do you think the theme enhanced your game, or would you have been happier with total freedom?

Is a very good idea to have a course theme, and the historic places and events was a really good start :) As Bob already mentioned various times, restricting (just a little bit) the possibilities avoids huge losses of time, letting us focus on something concrete and definite. Nobody knows what we would come to if we were given total freedom. In the end, it significantly enhanced our game and introduced the most significant fan factor, for ours as well as for all the other games in the course.

What would you do differently in your next game project?

- Code more defensively (and intensively ;), as the amount of work is enormous, probably bigger than we expected;
- Check results on the console more often, as the main problem of our game is with performances; some more time for in depth optimization would have been helpful;
- Don't reinvent the wheel, as we tried to use our own components for everything in the beginning, and soon got overwhelmed by the whole engineer/develop/debug that every single element needed (who said "physics"? :)
- Avoid too complicated game rules, as the game is supposed to be played by normal people, not just crazy computer science students (and even then...);
- Work with an artist in a team is definitely a must for us; we didn't have the time to learn the tools of the trade, at least not at the proficiency level needed to produce something really beautiful.

What was your greatest success during the project?

That it is actually playable and balanced.

Are you happy with the final result of your project?

It could have been better, but we are happy.

Do you consider the project a success?

Yes.

To what extend did you meet your project plan and milestones (not at all, partly, mostly, always)?

Mostly. Although we have changed the project plan, we think we have met all the milestones with equivalently completed tasks.

What improvements would you suggest for the course organization? (perhaps in D1 evaluation)?

Maybe more meaningful lectures & exercises. Promote more a structured collaboration with artists.

Did you like the XNA framework?

Yes, as it is really very good opportunity to overcome low-level details and implement a game in 3 months. Furthermore, .Net framework was new and interesting experience for all team members.