Game Time System

Intro

There are 3 prefabs presented in Game Time System asset:

1. **Time System** (required) - main prefab that contains all logic behind time flow with hotkeys controls without its visual representation. This prefab is essential for the system to work.
2. **Canvas Time System** (optional) - prefab with ui controls for the system.
3. **Light Day Night** (optional) - prefab with the lights that is responsible for day/night cycle and sun rotation. For correct lights - remove other directional lights on the scene.

Quick start

To quick start using system add prefabs **Time System, Canvas Time System, Light Day Night** to the scene and remove any existing directional lights. Configure prefabs parameters as desired or use default values.

How to use

Required prefab to use the system is **Time System** prefab. Add it to the scene and the system will start working without any visual representation. You can control time flow with hotkeys that could be configured in specified prefab, with default values:

- **Space** - toggle pause
- **~** - pause
- **1** - normal speed
- **2** - fast speed
- **3** - super fast speed

If you need visual representation and onscreen controls you can add prefab **Canvas Time System** to the scene.

If you need day\night light changes and sun rotation - add prefab **Light Day Night** to the scene. Remove any existing directional lights.

Usage in script

Any script on the scene can be subscribed to time update events:

```
private void Start()
{
    GameTimeManager.AddOnTimeChanged(TimeChangedMethod);
    //OR
    GameTimeManager.AddOnTimeChanged((newTime) =>
TimeChangedMethod(newTime));
}

private void TimeChangedMethod(GameDayTime newTime)
{
    //time changed
}
```

Parameters explained

Time System (component GameTime)

- **Start Time** - time that the system will start with (should be in format HH:MM, ex. 08:00)
- **Day Duration** - Day duration in realtime seconds.
- **Fast Flow Speed** - Time flow multiplier for fast speed. (if value 2 - time will pass 2 times faster than normal)
- **Super Fast Flow Speed** - Time flow multiplier for super fast speed.(if value 3 - time will pass 3 times faster than normal)
- **Hokeys** - configurable hotkeys for controlling time flow speed

Canvas Time System (component TimerUI)

- **Use 24 hours** - If true time will be in 24h format, otherwise in 12h format (am pm).

Other parameters are just references to the ui objects.

Light Day Night

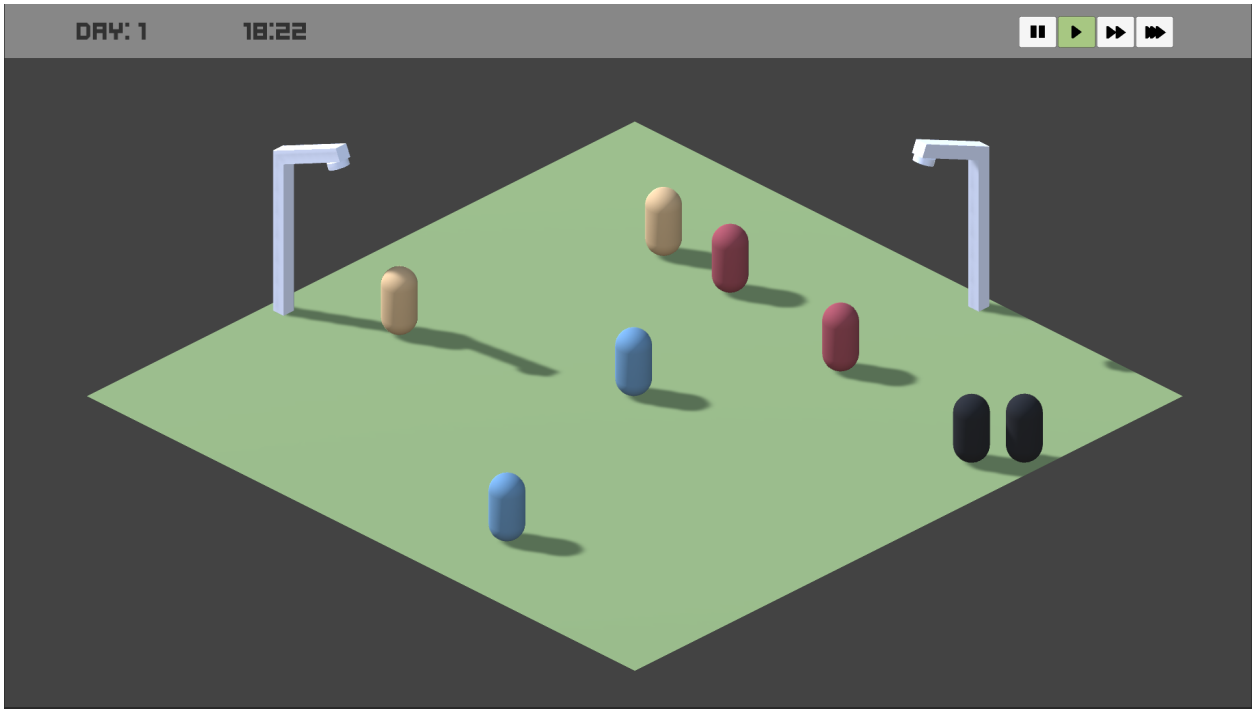
- **Color Night Day** - Gradient color for day cycle light. 0% location is time 0:00, and 100% location is time 24:00
- **Sun Rotation Cycle** - Sun rotation value for day cycle. Since sun rotation isn't linear in real world, to simulate rotation closer to real this value was introduced.
  X=0 is 0:00 time, and X=1 is 24:00 time.
  Y=0 - rotation 0 degrees, Y=1 - rotation 360 degrees.
- **Sun Light** - reference to a directional light object

Demo Scene

On the demo scene you can see usage of all 3 prefabs and objects that update their behaviur depending on the day time.

Agents walking at day time and sleeps at night.

Streetlights are only activated at night



Thank you

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