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Quick Start:

1) Import the "Day/Night Cycle" package into your HDRP Project.
2) If you don’t need the Demo Scene, disable it in the import window.
3) In the Hierarchi window, remove or disable Directional Light.

4) Find the DayNightCycle prefab and place it in the scene (TwistedImage>DayNightCycle>Prefab)

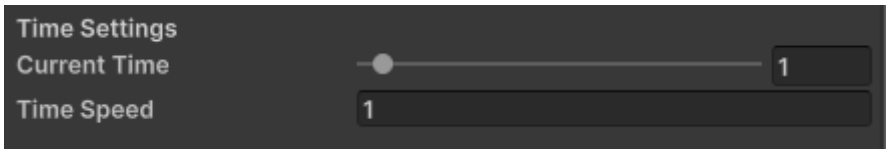
5) The Day and Night system is ready to use:)

Prefab DayNightCycle contains four objects:

DayNightManager - contains a script controlling all parameters of the day and night cycle.
Globa Volume - includes „Physically Based Sky" and „Exposure” controls.
Sun - Directional Light simulating the Sun
Moon - Directional Light simulating the Moon

Day Night Manager:

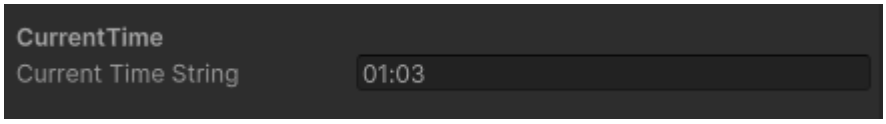
- **Time Settings:**



Current Time - Slider that allows you to set the starting time.

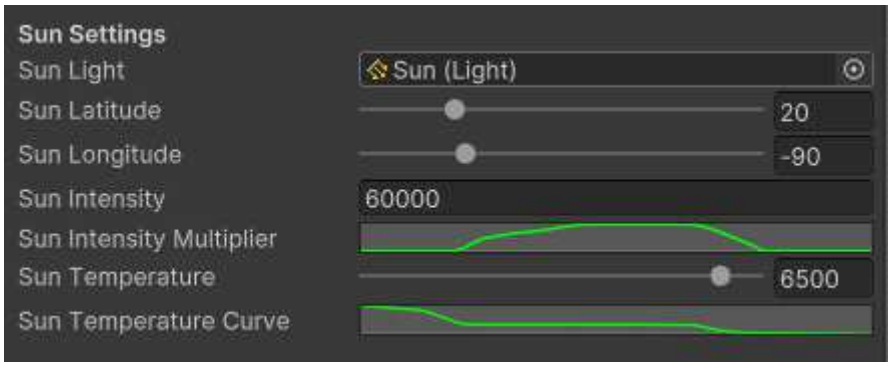
Time Speed - Time elapsed multiplier. When set to 1, one second of real time equals one minute of script time. A negative value turns back time.

- **Current Time:**



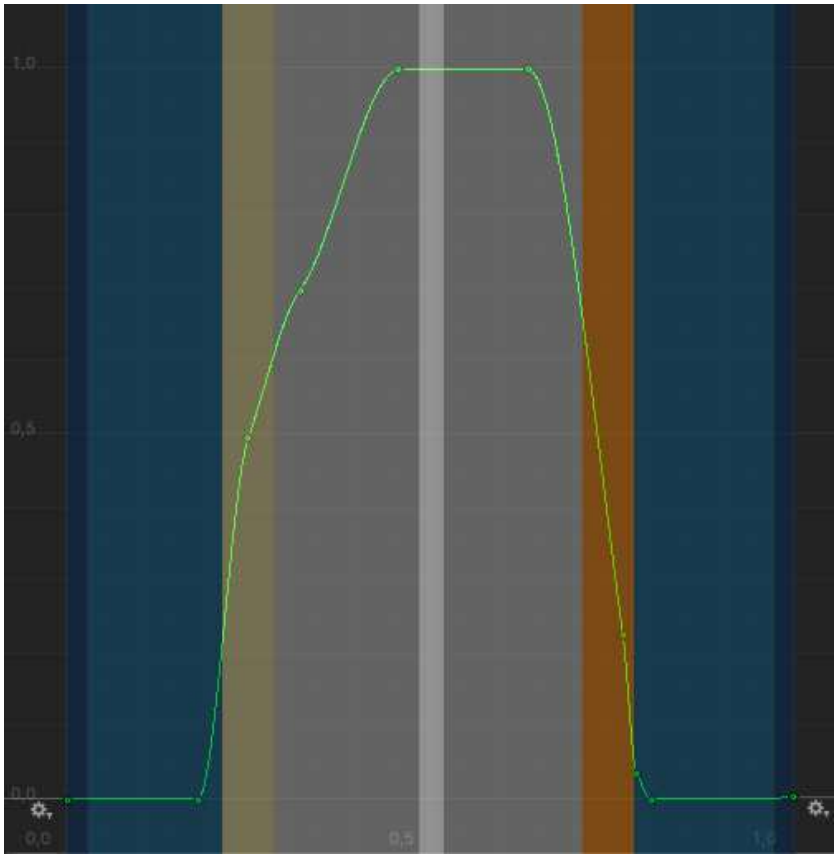
Current Time String - shows time in the hh:mm system in Inspector.

- **Sun Settings:**



Sun Light - Directional Light object simulating the Sun.
Sun Latitude - Sun latitude determines the maximum height of the Sun. Range 0-90
Sun Longitude - Sun longitude determines the position of the Sun. Range -180, 180
Sun Intensity - Basic Sun intensity value. Together with **Sun Intensity Multiplier**, it affects the brightness of the Sun during the cycle.
Sun Intensity Multiplier – Curves that decreases or increases Sun intensity over time.

Sun Intensity Multiplier Curve



0 - Midnight | 0.25 - Dawn | 0.5 - Noon | 0.75 - Dusk | 1 - Midnight

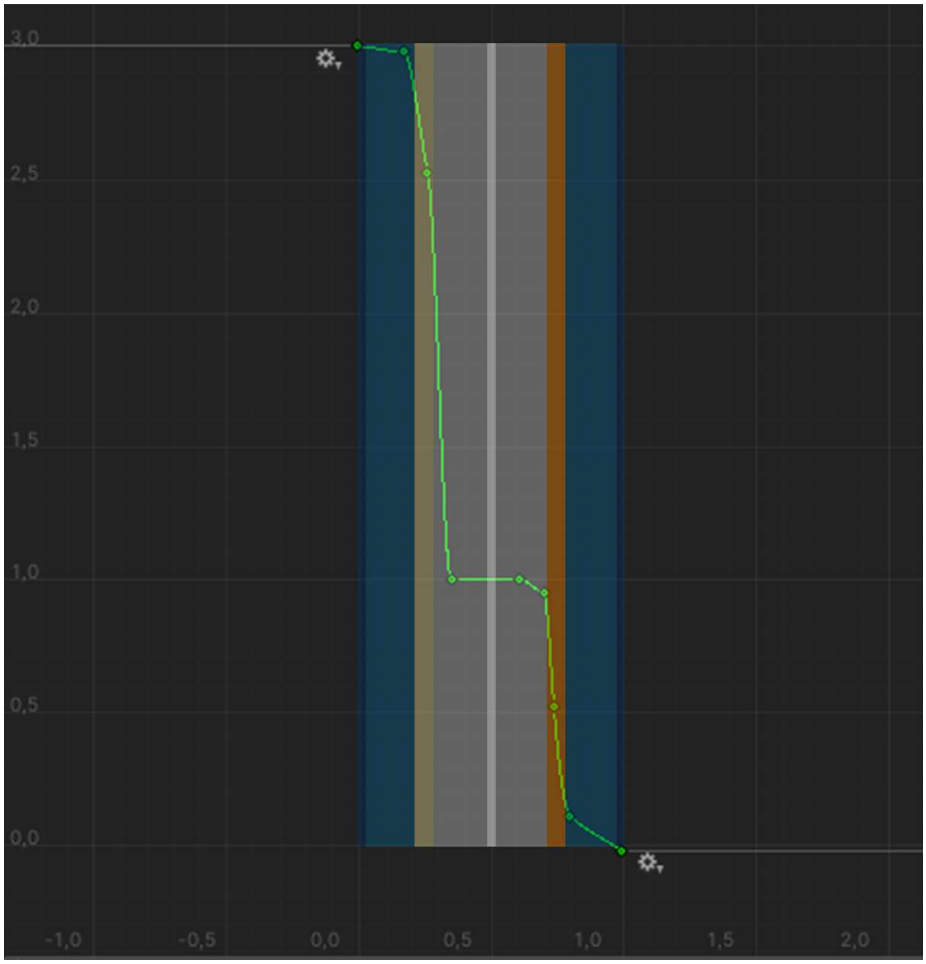
Deep blue : Midnight
Blue : Night
Yellow: Dawn
Gray: Day
White: Noon
Orange: Dusk

On the curve:
Time - this value determines the current time, starting the cycle at midnight (point 0,0) and ending it at position 1.0, which is also midnight.
0 - Midnight | 0.25 - Dawn | 0.5 - Noon | 0.75 - Dusk | 1 – Midnight

Value - this value is a multiplier of the Sun intensity. The higher the value, the greater the intensity. Point 0 - no light, point 1 - light value determined in **Sun Intensity**

Sun Temperature - determines the basic color temperature of the Sun.
Sun Temperature Curve - decreases or increases Sun temperature over time.

Sun Temperature Curve



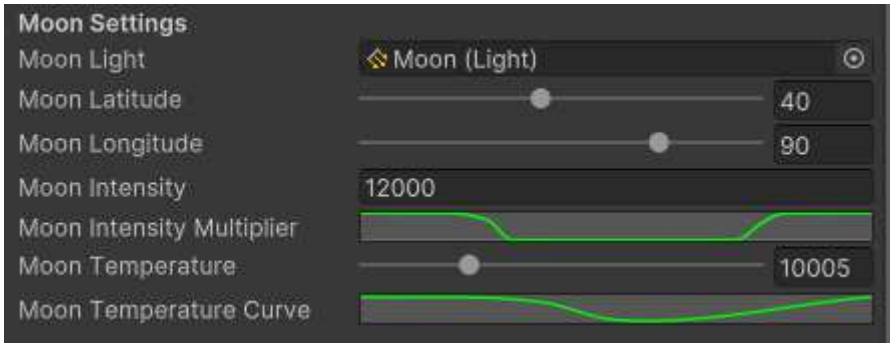
0 - Midnight | 0.25 - Dawn | 0.5 - Noon | 0.75 - Dusk | 1 - Midnight

Deep blue : Midnight
Blue : Night
Yellow: Dawn
Gray: Day
White: Noon
Orange: Dusk

On the curve:
Time - this value determines the current time, starting the cycle at midnight (point 0,0) and ending it at position 1.0, which is also midnight.
0 - Midnight | 0.25 - Dawn | 0.5 - Noon | 0.75 - Dusk | 1 – Midnight

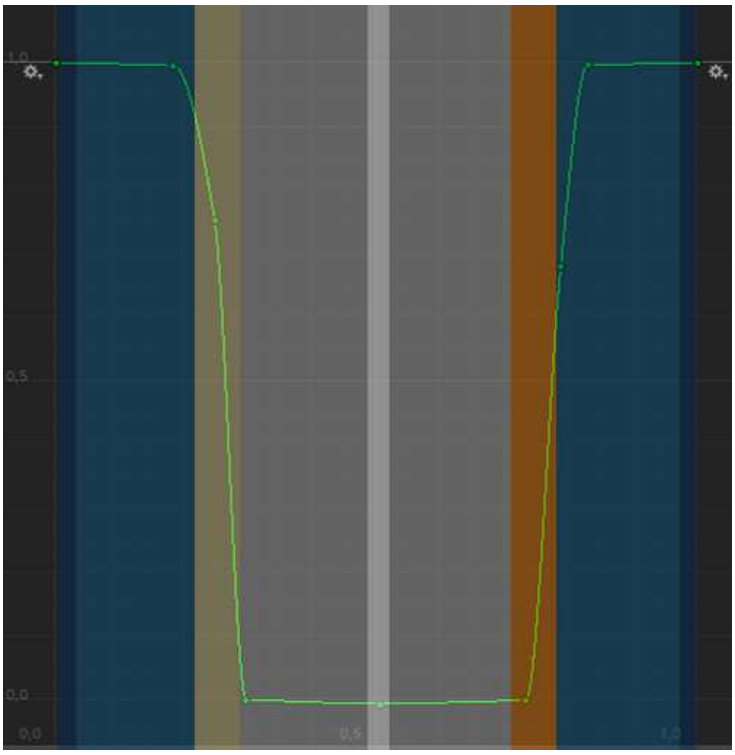
Value - this value is a multiplier of the **Sun Temperature**. The higher the value, the greater color temperature.

- **Moon Settings:**



Moon Light - Directional Light object simulating the Moon.
Moon Latitude - Moon latitude determines the maximum height of the Moon.
Range 0-90
For best results, the value should be the same as Star latitude.
Moon Longitude - Moon longitude determines position of the Moon.
Range -180, 180
For best results, the value should be the same as Star longitude.
Moon Intensity - Basic moon intensity value. Together with **Moon Intensity Multiplier**, it affects the brightness of the Moon during the cycle.
Moon Intensity Multiplier – Curves that decreases or increases Moon intensity over time.

Moon Intensity Multiplier Curve



0 - Midnight | 0.25 - Dawn | 0.5 - Noon | 0.75 - Dusk | 1 - Midnight

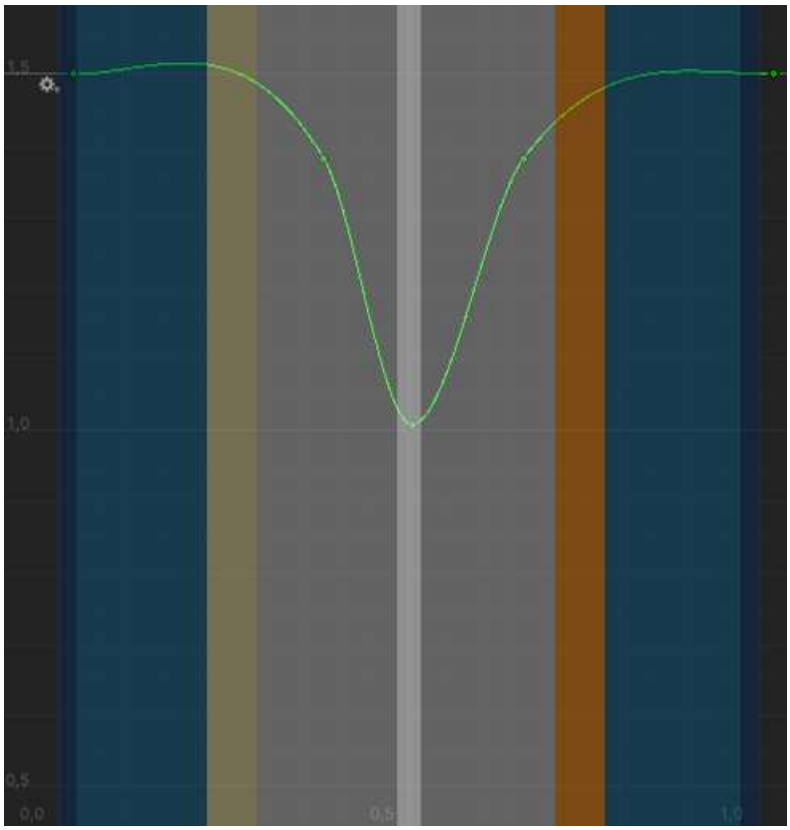
Deep blue : Midnight
Blue : Night
Yellow: Dawn
Gray: Day
White: Noon
Orange: Dusk

On the curve:
Time - this value determines the current time, starting the cycle at midnight (point 0,0) and ending it at position 1.0, which is also midnight.
0 - Midnight | 0.25 - Dawn | 0.5 - Noon | 0.75 - Dusk | 1 – Midnight

Value - this value is a multiplier of the Moon intensity. The higher the value, the greater the intensity. Point 0 - no light, point 1 - light value determined in **Moon Intensity**.

Moon Temperature - determines the basic color temperature of the Moon.
Moon Temperature Curve - decreases or increases Moon temperature over time.

Moon Temperature Curve



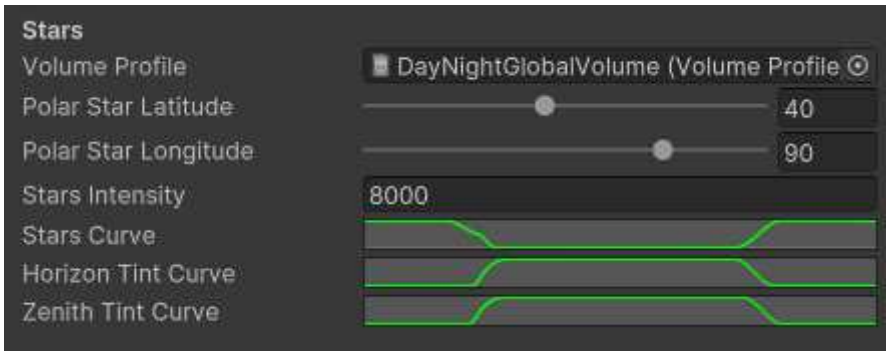
0 - Midnight | 0.25 - Dawn | 0.5 - Noon | 0.75 - Dusk | 1 - Midnight

Deep blue : Midnight
Blue : Night
Yellow: Dawn
Gray: Day
White: Noon
Orange: Dusk

On the curve:
Time - this value determines the current time, starting the cycle at midnight (point 0,0) and ending it at position 1.0, which is also midnight.
0 - Midnight | 0.25 - Dawn | 0.5 - Noon | 0.75 - Dusk | 1 – Midnight

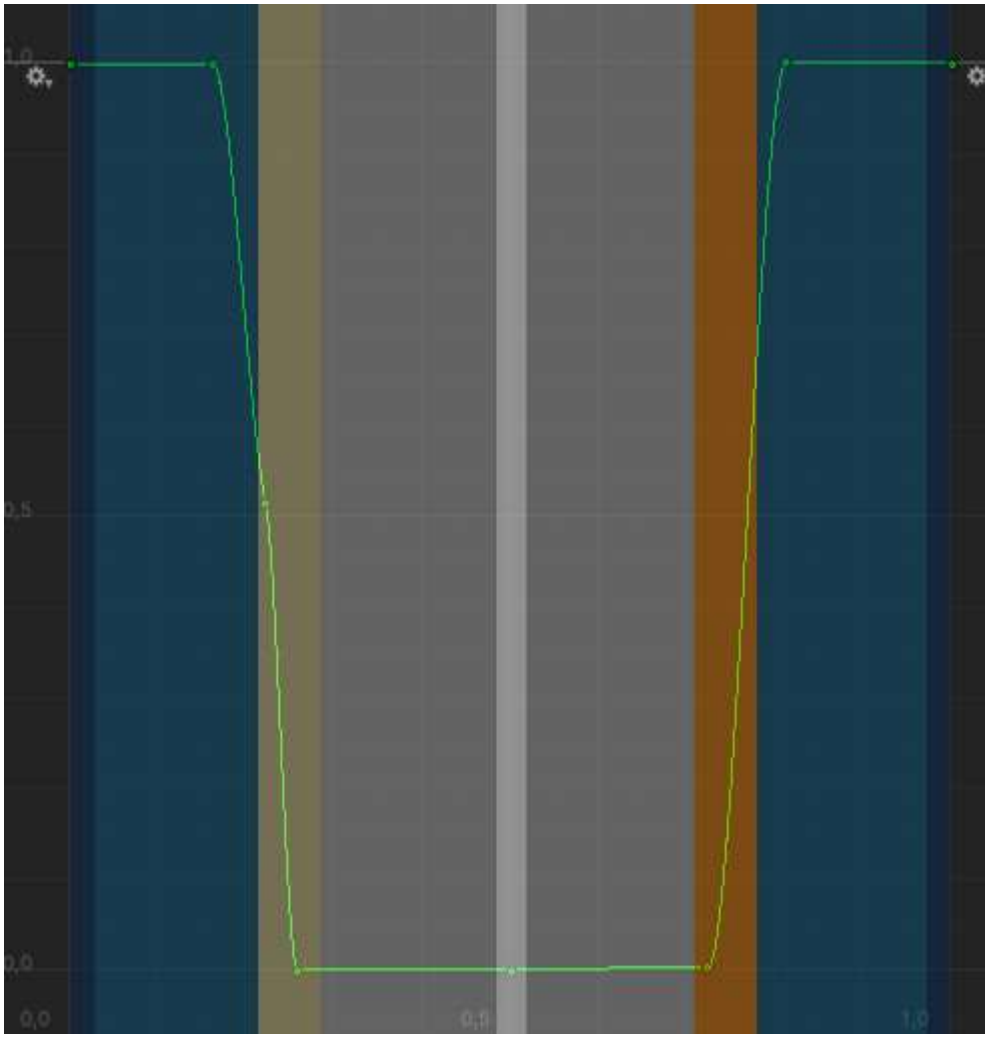
Value - this value is a multiplier of the **Moon Temperature**. The higher the value, the greater color temperature.

- **Stars Settings:**



Volume Profile - Volume Profile containing Physically Based Sky.
Polar Star Latitude - determines the height of the stars rotation point (Polar Star). Range 0-90
Polar Star Longitude - determines the position of the stars rotation point (Polar Star). Range -180, 180
Stars Intensity – Skybox intensity value. Together with **Star Curve**, affects the brightness of the skybox during the cycle.
Stars Curve – Decreases or increases skybox intensity over time.

Stars Curve



0 - Midnight | 0.25 - Dawn | 0.5 - Noon | 0.75 - Dusk | 1 - Midnight

Deep blue : Midnight
Blue : Night
Yellow: Dawn
Gray: Day
White: Noon
Orange: Dusk

On the curve:
Time - this value determines the current time, starting the cycle at midnight (point 0,0) and ending it at position 1.0, which is also midnight.
0 - Midnight | 0.25 - Dawn | 0.5 - Noon | 0.75 - Dusk | 1 – Midnight

Value - this value is a multiplier of the Skybox intensity. The higher the value, the greater the intensity. Point 0 - no visible skybox, point 1 – skybox value determined in **Stars Intensity.**

Horizon Tint Curve - The curve of the horizon tint changing over time
Zenit Tint Curve - The curve of the zenit tint changing over time

Horizon and Zenit Curve

0 - Midnight | 0.25 - Dawn | 0.5 - Noon | 0.75 - Dusk | 1 – Midnight

Deep blue : Midnight
Blue : Night
Yellow: Dawn
Gray: Day
White: Noon
Orange: Dusk

Time - this value determines the current time, starting the cycle at midnight (point 0,0) and ending it at position 1.0, which is also midnight.

Value - Depending on the curve, it determines the intensity of the horizon or zenith tint over time

Control Indicators:

IsDay - Displays a marker whether it is day or night
Sun Active - displays in inspector a marker whether it Sun is active or not
Moon Active - displays in inspector a marker whether it Moon is active or not

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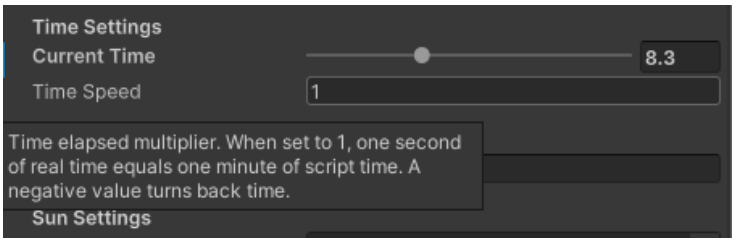
Tips:

- After pointing the mouse cursor at a given function, a short description appears.



- You can freely edit the script as well as all settings of curves, exposure and so on to achieve the desired effect.
- The scene demo includes a simple script to move the camera.

- **In Unity 6,** the moon's illumination depends on the position of the sun.
  For other Shading recommended values are:

  -Shading: Emission
  Surface Color: Hexadecimal: 1F1F1F

  -Shading: Manual
  Surface Color: Hexadecimal: ABBCC6

Support:

If you have any questions, feel free to write: support@twistedimage.pl

Issues:

- In HDRP, if the vegetation colors in the Demo Scene are not displayed correctly, go to the **DemoScene>Art>Details>Materials**, then select any material, and in the Diffiusion Profile tab, click "Fix"

Third-party assets:

Nature models (Plants, Rocks) are taken from Unity HDRP sample scene.

Nature models (Meadow Grass, Rock, Stones) are taken from Unity Book of the Dead demo.