

ΓΡΑΦΙΚΑ & ΕΙΚΟΙΝΙΚΗ ΠΡΑΓΜΑΤΙΚΟΤΗΤΑ

LAB #2

3ds MAX – Εισαγωγή, Αρχικές ρυθμίσεις

3ds MAX

Περιεχόμενα

2

- Modeling
 - ▣ Basics, Polygons (subdivision surfaces),
 - ▣ Splines, NURBS modeling
- Animation
 - ▣ Hierarchies, Key-frames
- Lights
- Materials
- Rendering
- Special Effects

<https://www.autodesk.com/education/free-software/3ds-max>

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Εισαγωγή - Αρχικές ρυθμίσεις

3

- Workspace
 - ▣ Projects Folder
 - Scenes, Images
 - ▣ Create a new folder (Recommended)
- Customize
 - ▣ Customize (Custom UI and Defaults Switcher)
- Preferences
 - ▣ Customize (Preferences...)
 - Help (Change to Local Computer/Network)
 - Viewports (Display Drivers – Choose the recommended)
 - Files (Convert local file paths to relative - Enable)

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Basics

4

□ Interface (1/3)

▣ Menus

- Workspace Default --- Default with Enhanced Menus
- Not include all commands but also
- Some commands only found in Menus

▣ Command Panel

- Create, Modify

▣ Main Toolbar

- Move, Link

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Basics

5

□ Interface (2/3)

▣ Main area

- View Ports (Top, Front, Left, Perspective or Real World)
- View Ports Controls (Maximize Active, ...)

▣ Help Line

- Tell us what we can do

▣ Transform Controls

- Position of an object, Rotation,

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Basics

6

- Interface (3/3)
 - ▣ Animation Controls
 - Key frames
 - ▣ Transport Controls
 - Navigation through timeline
 - ▣ View Ports Controls
 - View Port Navigation

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Create & Modify objects

7

□ Use Menus or Command Panel

▣ Create Panel (Default)

■ Geometry, Shapes, Lights, Cameras, Helpers, ...

- Pick an Object Type (e.g. Sphere)

- Go to Perspective View

- Click and Drag – Release – Right Click to de-activate the Selection of the object

- Object Parameters

▣ Modify Panel

- Access the objects parameters

- Units in Inches

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Units

8

- Default Unit Measure in Inches
 - ▣ Select different unit measurement of an object
 - Select an Object (Select Object Tool - from Main Toolbar -)
 - Modify Panel - Parameters
 - Length, Width, Height (enter values)
 - ▣ Enable Display Unit Scale
 - Customize (Menus) – Units Setup
 - Choose between Metric / Us Standard / Custom
 - Usually we work in meters so lets choose Metric
 - ▣ Change the Size of the Word
 - Customize (Menus) – Units Setup
 - System Unit Setup (Assign the accuracy of a unit)
 - Set up and Restart 3ds MAX
 - 10mm to 1 mile²

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Grid

9

- Determine the scale of objects
 - ▣ Right click on “Magnet” Button - Snaps Toggle - in Mail Toolbar
 - Grid and Snap Settings Dial box
 - Home Grip
 - Grip Dimensions
 - Spacing,
 - Major Lines every Nth Grid Line,
 - Perspective View Grip Extent
 - ▣ Customize
 - Customize User Interface
 - (... , Colors tab, Elements, Grids, Intensity, Apply Colors Now, Save)

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View Port Navigation

10

- View Port Navigation tools
 - ▣ Zoom tool (distance change)
 - ▣ Hand tool
 - Not real pan tool, the camera change position and not only its angle
 - ▣ Field-of-View (true zoom, camera stay still)
 - ▣ Orbit Sub-Object tool or Arc Rotate
 - Click in the yellow circle which appears
 - ▣ Maximize viewports
 - ▣ Zoom Extents (All) Selected
 - Select Object – Main toolbar – Zoom Extents Selected
 - (All) Object zooms at All Viewports

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View Port Navigation

11

- Undo viewport command
 - ▣ Two Set of Undo
 - Scene: Menu Undo button or [Ctrl + Z]
 - Viewport: Perspective – Undo View Rotate or [Shift + Z]

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View Port Navigation Using hotkeys

12

- Memorize viewport hotkeys navigation
 - ▣ Middle mouse button
 - Middle click + drag [Move the camera][hand icon]
 - Alt + middle click + drag [Arc rotate][orbit]
 - Ctrl + alt + middle click + drag OR Turn the mouse wheel [zoom]
 - Alt + w [maximize/minimize active viewport]
 - “z” [zoom extents]

- Lost my Word (Perspective View)
 - ▣ Click Perspective – Choose Front (View)
 - ▣ Click Front – Choose Perspective (View)

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Transform Objects

13

- Select and Move – Main Toolbar OR “w” hotkey
 - ▣ Move Gizmo (x, y, z Axes)
 - ▣ In Perspective View we move in World coordinates
 - ▣ In all the others Viewports we move through local coordinates.
 - ▣ We can move in two directions using the right axes bracket (xy, xz, yz)

- Select and Rotate – Main Toolbar OR “e” hotkey
 - ▣ Rotate at one direction at time or at all directions (click at the center of object)

- Select and Uniform Scale – Main Toolbar OR “r” hotkey
 - ▣ Do NOT use this option
 - ▣ Instead we can change the parameters of an object using the Modify Panel

- Select Object – “q” hotkey

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Shading modes

14

- ❑ Select objects and move a little above the ground
- ❑ Zoom in Perspective View (Mouse wheel)
- ❑ Create Panel – Standard Primitives – Plane (Release mouse & Right click)
- ❑ Maximize View (Alt + w)
- ❑ Orbit (Alt + Middle mouse + drag)
- ❑ [+][Perspective][Realistic]
 - ❑ Realistic – “F3” hotkey
 - ❑ Shaded
 - ❑ Edged Faces – “F4” hotkey
 - ❑ Lights and Shadows
 - ❑ Facets
 - ❑ Hidden Line
 - ❑ Clay
 - ❑ Stylizes (Graphite, Ink, ...)

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Configure Viewports

15

- Click on an empty space in Main Toolbar
 - From the pop-up menu select Viewport Layout Tabs
 - The Viewport bar will appear at the left of the 3ds MAX
 - To create a new Viewport Layout Tab Click at the arrow
 - Choose a layout you wish
 - Select the layout you wish by click the layout icon in the bar menu

- Click on [+]
 - Chose Configure Viewports
 - Layout panel
 - Display Performance (Improve Quality Progressively)

- Visual Style & appearance
 - Selection (Selection Brackets,)

Ερωτήσεις

16

