

# WORLD OF DALYN

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A motion-based game for children with developmental coordination disorder, created by Eindhoven University of Technology.



Motion-based adaptable playful learning experiences for children with motor and intellectual disabilities



Lifelong Learning Programme

# INTRODUCTION TO THE M4ALL PROJECT

The M4ALL project is a European research and design project, in the EC Lifelong Learning Programme, that aims to fully exploit the potential of motion-based playful learning experiences for children with disabilities.



#### SETUP WoD

Please follow the following steps to setup World of Dalyn.

- 1. Download the Microsoft Kinect SDK here: <u>http://</u> <u>www.microsoft.com/</u> <u>en-us/download/</u> <u>details.aspx?</u> <u>id=43661</u>
- Install the Microsoft Kinect SDK, following the installation guide provided by Microsoft.
- Connect the Microsoft Kinect to your PC and to the power grid.

TUe_Kinect_Game_8_3D Configuration
Graphics Input
Screen resolution 1280 x 720 Vindowed Graphics quality Good V
Play1 Quit

## LAUNCH WoD

Now your ready to launch the game World of Dalyn.

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Find the executable file for the game in the following location: M4ALL-EIND/Build/ Final4\_incl-analyticstextures.exe In the configuration window, select the correct screen resolution (works best on a 1280 x 720 resolution). Set graphics quality to "Good". Optional: uncheck "Windowed" for full-screen mode.



## **INSERT PLAYER DATA**

Insert "PlayerID" number. This should be a number between 1 and 999. Optional: keep track of your players in a separate document connecting PlayerID number to name of the patient. In the application this is done through numbers to ensure anonymity of patients.

SessionID: 668		SessionID: 668		SessionID: 668							
		PlayerID: 999		PlayerID: 999							
PlayerID: 999	999	PlayerID: 999	999	PlayerID: 999	999						
FlyLevel		FlyLevel		FlyLevel							
# of repetitions: 10	10	# of repetitions: 10	10	# of repetitions: 10	10						
Difficulty Speed: easy	emedium ehard	Difficulty Speed: easy	emedium ehard	Difficulty Speed: easy	emedium ehard						
EggLevel		EggLevel	- 6-	EggLevel							
# of repetitions: 10	10	# of repetitions: 10	10	# of repetitions: 10	10						
Difficulty Range: easy	Cmedium Chard	Difficulty Range: easy	■ medium	Difficulty Range: easy	🖲 medium 😑 hard						
Difficulty Rotation: easy	■ medium ∈ hard	Difficulty Rotation: easy	e medium ⊖hard	Difficulty Rotation: easy	e medium e hard						
RockLevel		RockLevel		RockLevel	and the second						
Hands: eleft	⊖right  ■both	Hands: Eleft	⊖right ●both	Hands: Eleft	⊖right ●both						
# of repetitions: 10	10	# of repetitions: 10	10	# of repetitions: 10	10						

Next, insert the player preferences (\*): number of repetitions; level of difficulty; which hand(s) to use; for each of the mini-games.

When done, start playing by hovering over one of three "Island areas", using left and/or right hand. A level is selected when area lights up. Hold the position for 4 seconds to start the mini-game. \*Player preferences are not stored for later retrieval. Every play session these preferences will have to be re-inserted.



## LEVEL: ROCKS

In this level, the player should point his left and/ or right hand to the colored rectangular planes corresponding the top "indicator" plane.

If the player points out the right color, one of the rocks will be removed. Once all the rocks are gone, the dragon is freed and the level finished.



## LEVEL: FLY

In this level, the player is supposed to fly through all the rings consecutively.

When all the rings have been passed, the level is finished.

The player controls the movement (left/right) of the little flying dragon by leaning left or right with his arms stretched out to the side (T-shaped position).



## LEVEL: EGGS

In this level, the player controls the position of the raft. It will move left/ right in correspondence with the player striding left/right in front of the camera. The challenge for the player is to move to the location where the thrown egg will land. The sooner Dalyn is at the right position, the better the score. When all eggs have been thrown out of the nest and caught respectively by Dalyn, the level is finished.



#### SCORES

At the end of each of the three mini-games, scores and data will be presented via this GUI screen. After having viewed the data, the player may choose to press "Back" (using PC mouse pointer) in order to return to the main menu (Island).

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## KEYCODES

- Q Quit application
- Esc Go back to "Island"
- F Toggle "fullscreen" on/off
- H Toggle "score window" on/off
- M Toggle "play-with-mouse" on/off

```
000
                     Session 573 2014-07-10 12-08-02.xml - Beveiligd -
<?xml version="1.0" encoding="utf-8"?>
<Scene
         LevelId="Island">
         <StartTime>7/10/2014 12:08:02 PM</StartTime>
        <EndTime>7/10/2014 12:08:28 PM</EndTime>
        <Duration>0m 25s</Duration>
</Scene>
<Scene
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        <StartTime>7/10/2014 12:08:28 PM</StartTime>
         <EndTime>7/10/2014 12:08:30 PM</EndTime>
        <Duration>0m 1s</Duration>
        <Repetitions_Setting>0</Repetitions_Setting>
<Difficulty_Setting>medium</Difficulty_Setting>
        <TotalRings>0</TotalRings>
        <MissedRings>0</MissedRings>
         <CaughtRings>0</CaughtRings>
         <Score>0</Score>
</Scene>
<Game>
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        <Language>English</Language>
        <Version>4.3.1f1</Version>
        <StartTime>7/10/2014 12:08:02 PM</StartTime>
<EndTime>7/10/2014 12:08:30 PM</EndTime>
        <Duration>0m 27s</Duration>
         <SessionID>573</SessionID>
        <PlayerID>p1</PlayerID>
</Game>
```

#### .XML DATA FILE

The scores and data of every play session are stored in an .xml file. These files store "playsession"(\*\*), "date" and "time" within the filename. They can be found within the folder M4ALL-EIND/Build/ Final4\_incl-analyticstextures\_Data/ filename.xml The .xml files can be opened using e.g. NotePad or WordPad.

\*\*Important to note is that the play-session number will only be restored to "0" when the game is installed on a different device.