USER FRIENDLY TOOLS TO TEACH & RESEARCH ON A HUMANOID PLATFORM

TAKE CONTROL OF NAO AND BRING HIM TO LIFE WITH ALDEBARAN SOFTWARE SUITE.

• CHOREGRAPHE SUITE INCLUDING:
  - CHOREGRAPHE: PROGRAM WITH A POWERFUL BUT EASY TO USE VISUAL INTERFACE
  - MONITOR: VISUALIZE NAO’S JOINTS & SENSORS DATA IN REAL TIME

• WEBOTS FOR NAO: TEST AND VALIDATE YOUR PROGRAMS IN A HIGH-END FEATURES VIRTUAL ENVIRONMENT

KEY BENEFITS

- Intuitive graphical interface, suitable from beginners to experts. Ideal for animation or interactive applications design.
- Safe behavior testing in a realistic world ruled by a physics engine.
- Access to more than 2000 sensors and joints data with graphs for easy analysis.
CHOREGRAPHE
VISUAL PROGRAMMING SOFTWARE

CHOREGRAPHE KEY FEATURES

PRE-PROGRAMMED BEHAVIORS & BOXES
- Motions: animations, walk, sit, stand up...
- Audio: localization, text to speech, recognition...
- Object: face detection, face recognition, vision recognition...
- Communication: email, infrared, LEDs...
- Control: for, if, multiply, wait...

ROBOT REMOTE CONTROL
- Behavior manager: wirelessly launch and load behavior
- Video monitor: live video access to your robot camera in local network
- Robot view: 3D rendering and control of your robot

ACCESS TO ALL SENSORS AND MOTORS
- Through programming in Choregraphe
- Through Monitor provided with Choregraphe

WWW.ALBEBARAN-ROBOTICS.COM
**NAO SOFTWARE SUITE**

**MONITOR**  
**VISUALIZE NAO’S DATA**

- Monitor allows to visualize NAO’s sensors and joint motors data in real time.
- You can easily retrieve and graph all data from NAO’s sensors and joints motors. For example, you can illustrate closed loop control by graphing the angle command sent to a joint and the sensor position. You can even see the current used by the motors.
- It’s essential to enable students to understand the basics concepts used in the various disciplines interlinked with robotics.

**WEBOTS FOR NAO**  
**3D ROBOT SIMULATOR**

- Webots for NAO immerses you in a realistic physics world to test your NAO program. With more than 50 objects editable by controlling mass & inertia, create a virtual world where you can manage the dynamic (speed, weight) and collisions. Inspect warnings & bugs with the console and directly retrieve sensors information in Robot View. Follow a specify object, fine-tune the rendering of your simulation & record it.

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**MONITOR KEY FEATURES**

**DATA VIEWER**
- Large data range available:
  - Actuators (position, electric current, command, temperature, control parameters -Kp, Ki,...)
  - Sensors (FSR, gyrometer, accelerometer, battery...)

**CAMERA VIEWER**
- Video recorder in QVGA
- Video live feedback of NAO’s cameras [local network only]

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**WEBOTS FOR NAO KEY FEATURES**

**SENSORS**
- Camera 1 & Camera 2
- Articular position
- Inertial unit
- Force Sensitive Resistors (FSR)
- Sonars
- Bumpers
- Tactile touch
- Chest button
- Infra Red emitter/receiver
- Leds

**ENVIRONMENT**
- Weightiness (mass & inertia of NAO and environment)
- Collision: between NAOs & environment
- Simple object addition [More than 50 objects available]
- Move an object with mouse

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**NAO SUPPORT**
- NAO v3.3
- NAO v4 NextGen
- Multi-NAO on same simulation

**INTERFACE**
- Textures (e.g. paintings)
- Scene camera tethering [follow NAO or any objects]

**LANGUAGES**
- English - Spanish - Chinese
- French - Japanese - German

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**ENVIRONMENT EDITABLE**
- 2 Worlds available (empty & apartment)
- World editable - edit & save the world
- Objects editable [some parameters]
- Friction of NAO’s material (user-modifiable)
# NAO SOFTWARE SUITE

## REQUIREMENTS

<table>
<thead>
<tr>
<th>Category</th>
<th>Requirements</th>
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</thead>
<tbody>
<tr>
<td>OS</td>
<td>Windows 7 / XP, Mac OS X Snow Leopard / Lion and Linux</td>
</tr>
<tr>
<td>SYSTEM</td>
<td>1.5 GHz CPU / 512 MB RAM / 1.2 GB free disk space / certified OpenGL graphics card with at least 128 MB of RAM</td>
</tr>
<tr>
<td>NETWORK</td>
<td>Wifi access point, wired connection (for first initial setting), internet (for licence activation)</td>
</tr>
<tr>
<td>ROBOT COMPATIBILITY</td>
<td>Models: H25, H21, T14, T2. Versions 3.2 / 3.3 / Next Generation</td>
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Available on [www.aldebaran-robotics.com/downloads](http://www.aldebaran-robotics.com/downloads)


Data are subject to change without notice.