Intelligent Mobile Robotics
Mobile Robots / ARIA Software Setup Instructions

Software installation:

a) Visual C++ Express:

Download and install ARIA from the following link:
http://download.microsoft.com/download/1/D/9/1D9A6C0E-FC89-43EE-9658-B9F0E3A76983/vc_web.exe
Follow the instructions, register, etc.

b) MobileRobots' Advanced Robot Interface for Applications (ARIA) C++ library / SDK:

Download and install ARIA from the following link:
http://robots.mobilerobots.com/ARIA/download/archives/ARIA-2.7.3.exe

c) Mobile Sim:

Download and install MobileSim according to your platform:

For Windows 7:

http://robots.mobilerobots.com/MobileSim/download/archives/MobileSim-0.5.0.exe
Install MobileSim. Once installed, select the executable, and edit its properties to run with admin right and in compatibility mode (Windows XP mode)

For Windows Vista:

http://robots.mobilerobots.com/MobileSim/download/archives/MobileSim-0.4.0-1.exe
If you have trouble running it, try the compatibility and administrator run options above.

d) Mapper 3 Basic:

Download from Blackboard and install “Mapper3Basic-2.2.5.exe”.

Configuration:

a) Compile ARIA libraries:

Go to the ARIA program folder, e.g., "c:\Program Files\MobileRobots\Aria\" and open the project file "Aria-vc2010.sln". Build the subproject "AriaDLL". There might be some warnings you can probably ignore but there should be no errors.

b) Configure Visual C++ project:

Download "testProgram.zip" from Blackboard and unzip it. Open "Aria Test.sln" with Visual C++ 2010. Right click "AriaTest" in the Solution Explorer and select properties. Under "Linker" → "Input" → "Additional Dependencies" rename "Aria.lib" to "AriaDebugVC10.lib".

Now copy "c:\Program Files\MobileRobots\Aria\bin\AriaDebugVC10.dll" into the "AriaTest" project folder.

You will have to do this for every project you work on in this module.

Running your program:

a) Start the MobileSim simulator:

Start the MobileSim simulator and load in a map of your choice. The simulator is now ready to accept a network connection from your robot control program.

b) Compile and run your robot control program

Now compile and run your "AriaTest" program in Visual C++. Your program should connect to the robot (simulation) now and you should see the robot move…

Now modify your robot control program by adding, e.g., better obstacle avoidance, random wonder, etc. Have fun!!!