

They don't see me rolling...

ARENIB Delta

The dual parallel robot

Country:



France

Composed of:

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Advertised with:



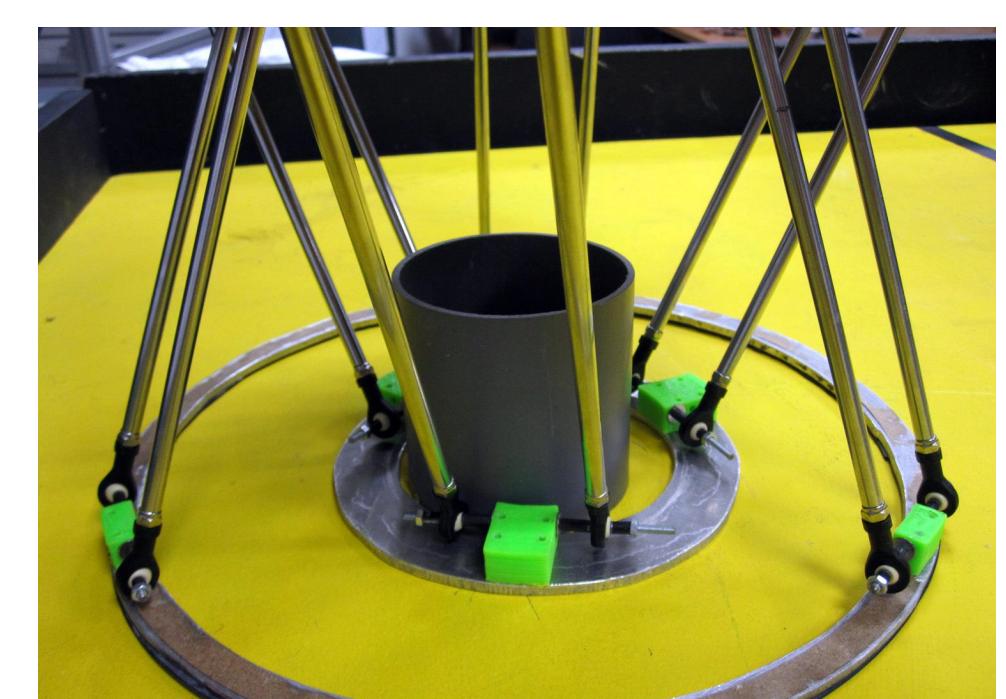
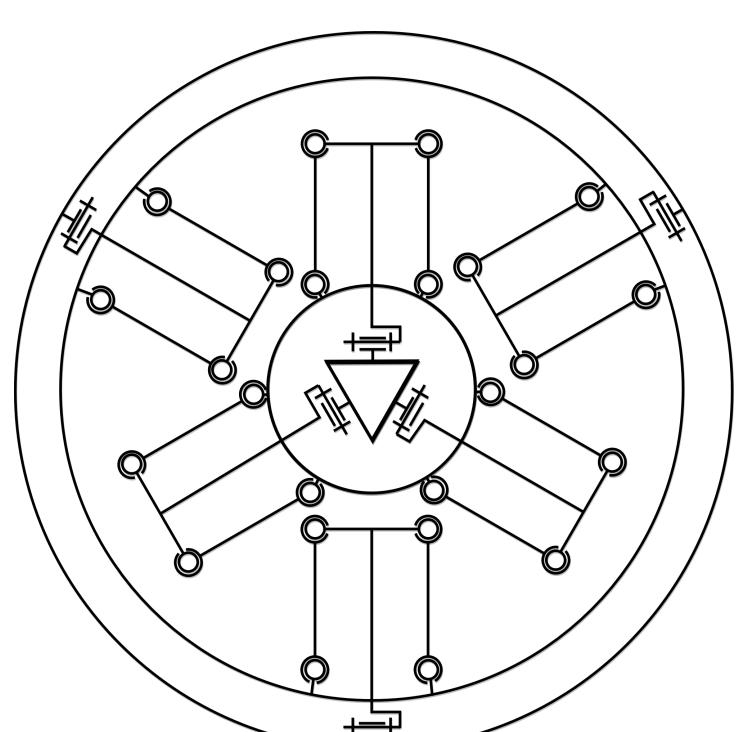
@ARENIBDelta

CONCEPT

Tired of always meeting the same kinds of robots (rolling, humanoids and insectoids), the team decided to explore the world of parallel robots to try to invent something new.

The robot is composed of two delta arms, one being inversed. Each arm uses three brushed DC motors to set three angles, allowing one plan of the robot to move parallel to another one. One of the two feet moves while the other one stays on the ground. The robot can then move by alternatively moving one feet or the other.

One of this robot's peculiarities is the fact that even if it can move in every possible direction, it cannot turn.



CONSTITUTION

Created during the two member's freetime, this robot was redesigned and rebuilt several times because of its overall complexity and its cheap components. The entire project is available under the Creative Commons BY licence.

Everything tactical and real world related is managed on a TI Stellaris LM4F120 chip. The motor's quadratured signals are acquired with two TI MSP430G2553. The two chips communicate using a SPI bus. Nothing is anything remotely related to arduino or anything of the kind.

The robot detects its foes with two sonars mounted on a rotating turret.

