

Tests to evaluate agricultural technologies with embedded AI via AgrifoodTEF

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▶ To cite this version:

Adriana P Sanchez Vargas, Michel Berducat. Tests to evaluate agricultural technologies with embedded AI via AgrifoodTEF: Services offered by the AgroTechnoPôle Platform. AGRITECHDAYS, Oct 2023, RENNES, France. hal-04248300

HAL Id: hal-04248300

https://hal.inrae.fr/hal-04248300

Submitted on 18 Oct 2023

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Services offered by the AgroTechnoPôle Platform

IN BRIEF

The AgroTechnoPôle platform supports stakeholders in developing Agro-equipment solutions towards agro-ecological transition.

INRAE-TSCF-AgroTechnoPôle is a partner of The European Testing and Experimentation Facilities for Agrifood Innovation - AgrifoodTEF, a network for designing and implementing Al testing and experimentation methodologies.

AgroTechnoPôle proposes in 2023 six tests available via AgrifoodTEF (2023 – 2027).





FIRST AVAILABLE TESTS

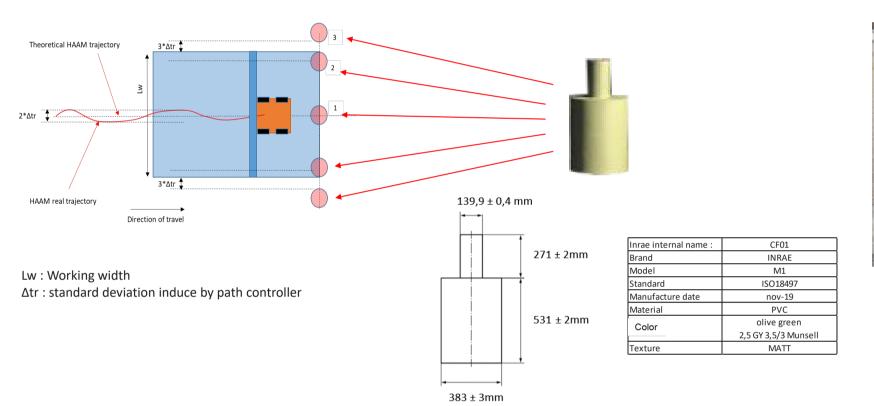
AgroTechnoPôle has developed several Agricultural Robotic Performance Assessment Tests, known as ARPA*, to evaluate Safety functions and other task performance. Most of the protocols are already available in our website scanning the QR code.



ARPA test are performed under controlled and reproducible conditions.

* ARPA: Agricultural Robot Performances Assessment focussed on Safety functions, identified as ARPA n (n: 1, 2, 3...) for safety tests or ARPA XX for other task performance tests.

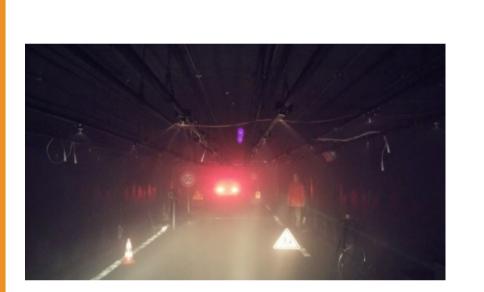
ARPA 1 verifies the safety devices of agricultural machines in open field with ISO reference obstacle.



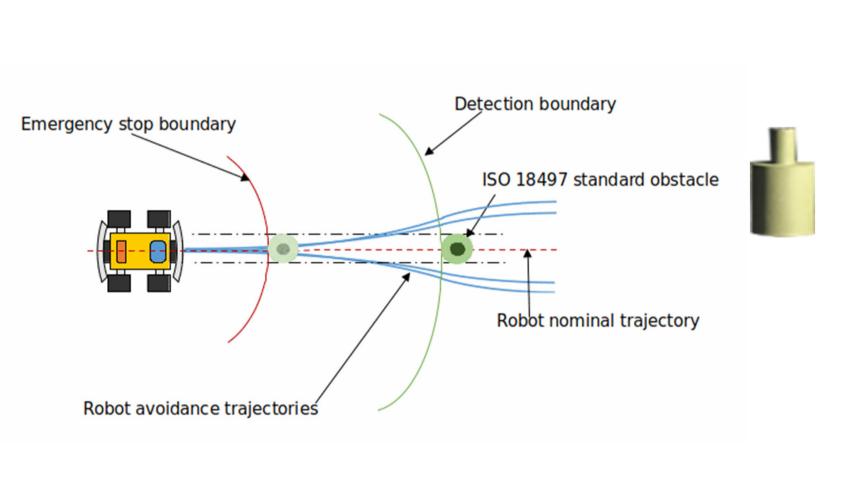


The test assesses the robot's ability to detect and stop when it encounters a reference obstacle in its detection zone

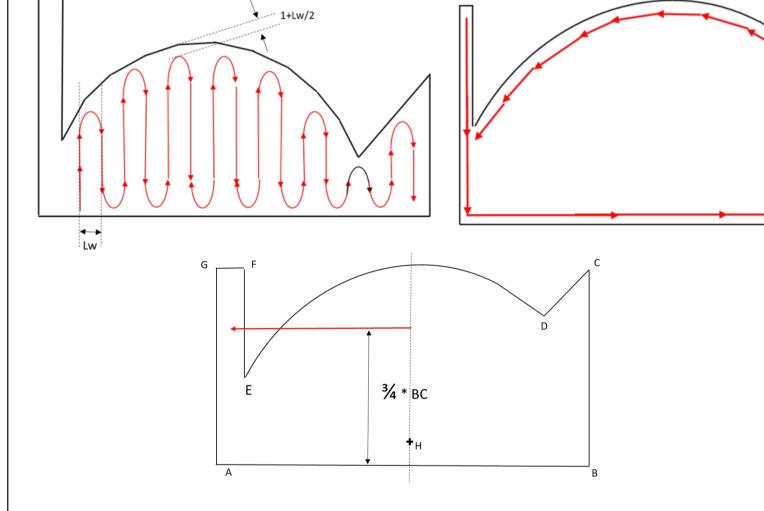
ARPA 2 evaluates perception systems in harsh environmental working conditions



It verifies that the sensors operate correctly and maintain their safety behavior during fog, rain, or night conditions

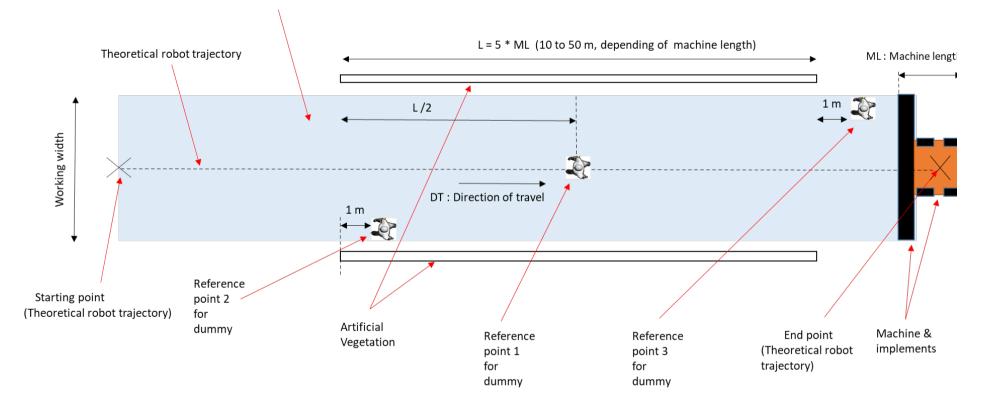


ARPA 3 assesses the security of geofencing devices (physical or virtual)



The test determines a robot's of its work area

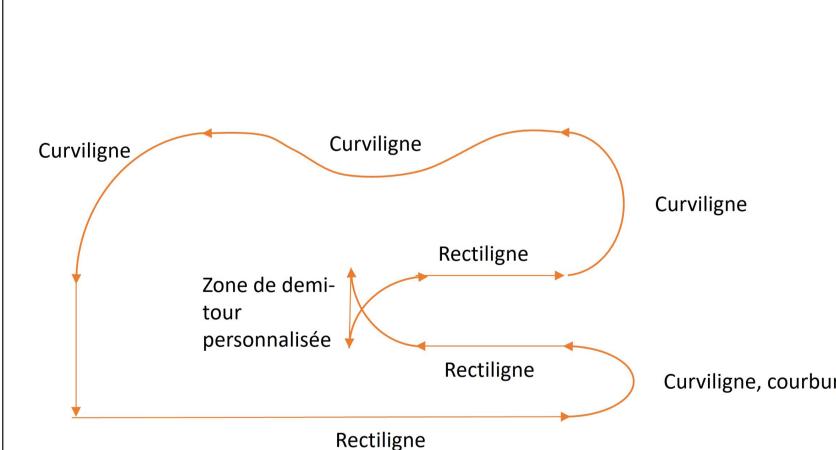
ARPA 4 evaluates safety devices for people detection and collision avoidance in an agricultural context.



It determines the robot's ability to detect humanability to respect the integrity | shaped obstacles and stop it when it encounters them



ARPA PC1 evaluates execution accuracy of robots trajectories in field production

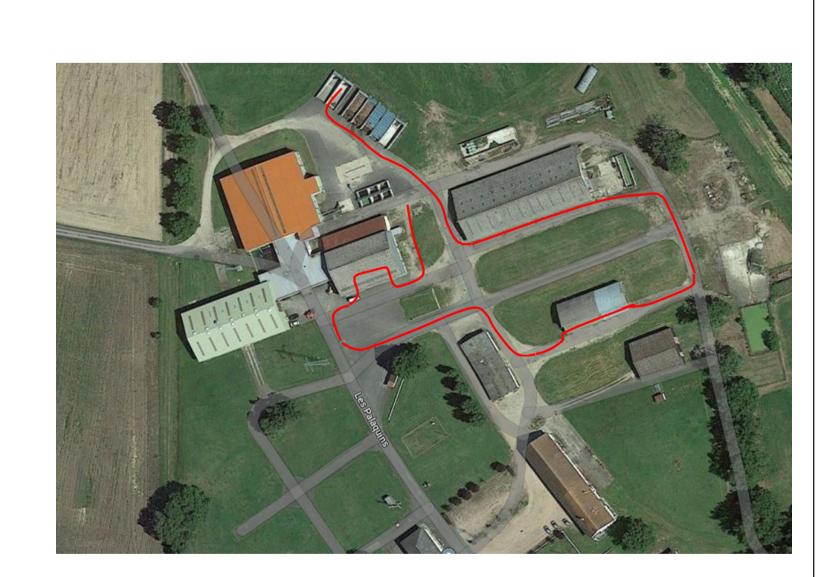


The test verifies the accuracy of execution of a proposed path, incorporating different types of perturbations

ARPA PC2 evaluates execution accuracy of robot trajectories for livestock production (in-door & out-door mobility)



It verifies the accuracy of execution of a proposed path in a «farmyard» environment, incorporating different types of perturbations



REGULATION ON MACHINERY

The new regulation on « Machinery products » was adopted in June 2023, with a transitional period until January 2027, when it will make mandatory a third-party conformity assessment for high-risk machines (6 categories).

The AgrifoodTEF network enables companies (start-ups, SME) to benefit from very attractive conditions when it comes to covering the costs of test services to qualify robotic devices incorporating Artificial Intelligence modules.

ACKNOWLEDGMENTS

The authors would like to thank, SHERPA-Engineering and CEREMA (STI Research Group), test operators of the AgroTechnoPôle, for the test service execution and INRAE -TSCF for leading AgroTechnoPôle

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