MALPAS offers one of the most rigorous, advanced software analysis and verification toolsets on the market today. Using Static Analysis techniques, which test code without executing it, a full analysis of program correctness, including problems that only occur at run-time, compliance with the software specification and functional integrity, can be performed.

MALPAS is of particular use for supporting software safety cases that require strong analytical evidence at a high integrity level.
MALPAS capabilities:

- Not language specific - can be applied to most programming languages
- Support for analysis and verification of COTS and legacy software
- Supports checking functional correctness of code and detecting runtime errors
- Provides complete path coverage
- Provides proof of correctness for all possible inputs
- Depth and range of analysis can be tailored to meet assessment/verification requirements
- Data Use analysis - checks for uninitialized variables etc.
- Control Flow analysis - checks for dead code, unsafe jumps etc.
- Information Flow analysis - reveals or checks dependence of procedure outputs on inputs
- Semantic Analysis - reveals semantics of code in terms of conditional parallel assignments
- Compliance Analysis - confirms that a program meets its formal specification, and code properties are satisfied

MALPAS has been applied to safety, security, mission, and business critical applications including:

- Sizewell B Nuclear Power Station Reactor Protection Systems
- Lockheed Martin C130J
- Swordfish Torpedo Arming System
- Merlin Helicopter Stores Management System
- Merlin Pitch control
- BAE Hawk Fly-by-Wire Control System
- Gas Distribution Network Control System
- Tornado Covert Radio Altimeter

Various training courses in the technique of Static Code Analysis and the use of MALPAS are available through Atkins. Courses can be held at Atkins offices or at a customer’s premises, and can be tailored to suit the level of management and technical detail required.

MALPAS is fully supported by Atkins under an annual support agreement – this includes regular product upgrades, and help with technical queries.

For further information and advice on MALPAS, to arrange demonstrations and presentations of the tool, or for any other queries, please contact the MALPAS Product Manager.


As the independent partner of choice in Defence & Security, we pride ourselves on finding the right solution whatever the challenge. Our expertise spans land, sea and air as well as information and communications and we work throughout the lifecycle of a platform, system or facility.

For more information please visit: www.atkinsglobal.com/defence or contact defencecommunications@atkinsglobal.com