

embedded Spectral Infra-Red imagingn technology (e-SpIRit)

The aim of e-SpIRit is to make Europe the technological leader in spectral imaging sensor and processing systems for industrial process control and analytical instrumentation. Although some research is being performed on an individual scale, due to a lacking cooperation and the absence of common standards and interfaces very few marketable integrated systems are available. e-SpIRit intends to provide the missing links among European players to form a task force of critical mass and comprehensive knowledge. The project's scope subsumes three focus activities in order to lift spectral imaging beyond the maturity level and stimulate customer awareness concerning new technological possibilities. The first concentrates on matching of available technology and knowledge between partners, leading to standardisation of components and component interfaces. The goal is the unification of interfaces between the units of a spectral imaging sensor system and the development of easy-to-use building blocks for system integration, enabling standard solutions to a wide range of applications at competitive prices. Market studies and trend scouting will investigate new application fields not covered by any solutions provider in this field yet. The second activity deals with development and improvement of the spectral imaging hard- and software components, targeting the enlargement of the spectral range and the development of algorithms with real-time performance for spectral data evaluation and classification. The third activity delivers concept demonstrators within exemplary application fields as material sorting, colour metrology, food quality control and medical scanning. The proposed project will increase the competitiveness and open new sales opportunities for the involved European high-tech SME's against the currently dominating US equipment providers and decouple the price range of solutions from the space and military market to make it available for European industry.