LEADOUT

Project Title: LEADOUT
Contract Number: COLL-CT-2004-500454

Low Cost Lead-Free Soldering Technology to Improve Competitiveness of European SMEs

STRATEGIC OBJECTIVES

Provide support to European SMEs to implement a Soldering Technology aimed at the following strategic objectives:

- Developing low cost lead free soldering processes to enable SMEs to meet the requirements of new EU directives (WEEE and RoHS);
- Establishment of process quality standards to assist SMEs to rapidly convert to lead-free soldering, reducing defect rates, improving product reliability and increase European Competitiveness;
- Improve Health and Safety awareness and Pollution Prevention

KEY ISSUES

The Leadout project is target at addressing two EU Directives; the Waste Electronic & Electrical Equipment (WEEE) and the Restriction of Hazardous Substrances (RoHS), the latter becoming effective on 1 July 2006.

With a few highly specialised exceptions this will outlaw the use of tin/lead solders. Whilst lead-free solders have been available for some time, most SMEs are unfamiliar with the range of alloys and fluxes available, and the different processing parameters they require. Of particular importance will be the effect of the change in soldering technology on product yield, quality and reliability.

PROJECT OVERVIEW

The project consortium is large and broad in scope, including a core group of 16 SMEs from all sections of the supply chain – PCB manufacturers and assemblers, testing and design companies and solder-paste and equipment suppliers – as well as having four research institutes and 11 industrial associations. A range of dissemination activities such as e-learning packages, seminars and industrial-association events are planned and some are already underway, particularly through the industrial associations.

TECHNICAL APPROACH

The Leadout project has three primary approaches to assist SMEs make the transition to lead-free soldering:

Process management. The identification and implementation of process best practice within the production chain. This will be supported by benchmarking of process yields of SME project partners through the PPM (parts per million) survey.

Joint reliability. Assessment of the suitability of low cost soldering systems and qualification of processes using appropriate accelerated reliability regimes.

Environmental assessment. Workplace and environmental impact aspects of lead-free soldering technology will be determined together with a full industrial Life Cycle Analysis.

Collective Research Project
funded by the European Commission

HORIZONTAL ACTIVITIES INVOLVING SMEs

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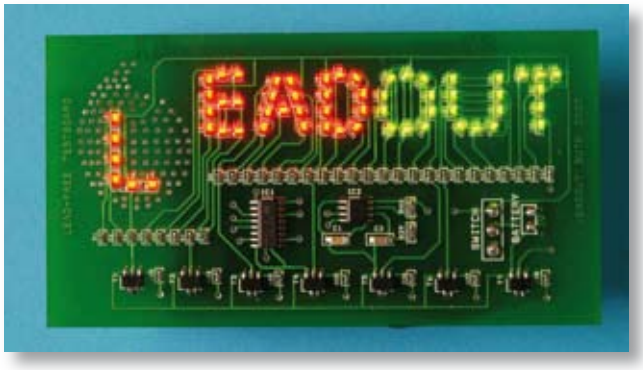
ANTICIPATED ACHIEVEMENTS

A range of different technical assessments and outputs of the project will be generated. They include:

- A web-site and Virtual Institute that will act as a portal for dissemination and allow access to training materials.
- Solderability and reliability trials using a range of commercially available components, solders, fluxes and assembly processes.
- European process yield benchmarking.
- The establishment of Industrial Quality Standards for lead-free soldered joints.
- Environmental assessment of lead-free soldering technology.
- Assistance for SME partners in implementing lead-free soldering.
- Guidelines on process, technology and environmental improvement.
- Project newsletters, events and seminars disseminating key information to allow preparation for the transition to lead-free soldering.
- The development and implementation of training courses.



Participant Name	Participant Short Name	Country
Associação Portuguesa das Empresas do Sector Eléctrico e Electrónico	ANIMEE	P
Associação Portuguesa de Empresas de Tecnologias Ambientais	APEMETA	P
Surface Mount and Related Technologies Ltd	SMART GRP	UK
Asociacion de Empresas de Electrónica, Tecnologías de la Información y Telecomunicaciones de España	AETIC	E
Hungarian Federation for Electronics and Infocommunication	MEISZ	HU
JEMI France	JEMI	F
Forshungsvereinigung Schweißen und Verwandte Verfahren e.V. des DVS	DVS	D
ITEK	ITEK	DK
Industry Council for Electronic Equipment Recycling	ICER	DK
Camera di Commercio, Industria, Artigianato e Agricoltura di Milano	CCIAA	I
European Federation for Welding, Joining and Cutting	EWF	EU
SILGAL, Soc. Internacional de Importações, Lda.	SILGAL	P
CROSSLINE-Produção Electrónica, SA	CROSSLINE	P
Telca Telecomunicações e Assistência, Lda	TELCA	P
ALCAD, SA	ALCAD	E
Integracion Industrial Electronica, S.L.	IDK	E
ZUBELZU, SA	ZUBELZU	E
Canford Audio plc	CANFORD	UK
Blundell Production Equipment Ltd	BLUNDELL	UK
DKL Metals, Ltd	DKL	UK
Beta Electronics, Ltd.	BETA	UK
Számítástechnikai Elektronikai Méréstechnikai Ipari, Kereskedelmi, Szolgáltató Kft.	SZEM	HU
ELSZETRON Technológiai Szolgáltató és Kereskedelmi Kft.	ELSZETRON	HU
Automated Micro Technology Limited	AMTECH	UK
IMMG S.A.	IMMG	EL
Iselqui Technology	ISELQUI	I
MESATRONIC, SA	MESATRONIC	F
ISQ - Instituto de Soldadura e Qualidade	ISQ	P
TWI, Ltd.	TWI	UK
Fundacion Inasmet	INASMET	E
Department of Electronics Technology Budapest University of Technology and Economics	BUTE	HU

Total project cost: €4.6M

EC Contribution: €2.7M

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