Micro assembly for industrial market

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Scope

- TAIPRO Engineering’s objectives
- Microsystem definition
- TAIPRO’s activities
- Microsystem prototyping summary
- Industrial market (potential applications)
- Conclusions
TAIPRO Engineering’s objectives

Taipro’s goal is to give a high level support to identify and respond to needs of industrialists by:

- Proto/demo of tailored microsystems for specific applications.
  - Proof of concept studies (design & proto/demo fabrication)
  - Fabrication of very small series (~ 100 assemblies/year) and support for larger series in a first step.

TAIlored microsystem improving your PROduct
Microsystem definition

**Microsystem – Smart sensor**

**Microsystem** is a device including:

- sensors
- Electronics and firmware
- Micro actuators, receptors and/or emitters (interaction with external world);
- Power supply
TAIPRO’s activities

- TAIPRO Engineering focuses its activities on innovative micro assembly (packaging) of existing sensors and microelectronic COTS (Components Off The Shelf) to perform customized solutions with new functionalities for industrial applications:
  - Tailored development project for in situ proof of concept demonstration,
  - Packaging/micro assembly consultancy and pre-production series which need specific support before manufacturing,
  - Training on specific packaging and testing equipment,
Industrial market (potential applications)

- Insert/bracing conductive cylinders in the holes (diam 1 mm)
- External behaviour – with and without glob top

Flying sensors

Alumine plasma huile.avi

Fluid manipulation

TAIlored microsystem improving your PROduct
Industrial market (potential applications)

Micro assembly guidelines

Before (or in //) designing your components/devices:

• Think about modelling (i.e. electrostatic effect)

• Think about micro manipulation itself (i.e. which tools exist to manipulate it)

• Think about techno tests (does it work)

How to manipulate?
Conclusions

- TAIPRO Engineering can design and build your TAIlored microsystems demonstrators or prototypes to improve your PROduct or PROcess. TAIPRO Engineering also can help and guide industrialists through micro assembly or microsystems production:
  - Tailored development project for in situ proof of concept demonstration.
  - Packaging/micro assembly consultancy and pre-production series which need specific support before manufacturing.
  - Training on specific packaging and testing equipment.

14/12/2009