A3Ple
Autonomous
Printed Paper Products
for Labels & Electronics

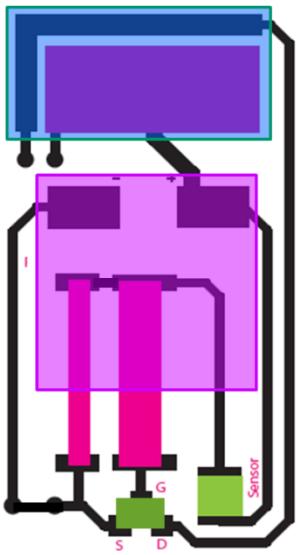
www.a3ple.eu

NEWSLETTER # 10

May 2015 – Project month 48

Final newsletter - Demonstrators

The objective of the project was to develop the next generation of sustainable paper-based products with specific autonomous functionalities aiming at interacting with their users and/or reporting changes in their environment. A major focus was placed on the development of electronic circuit with printing technology and low power consumption.
Electrical and printing integration on design has permitted to produce two demonstrators and design a third one.



A3Ple Demo 1
Gas Sensor

Paper (15x8cm²)

Inks:

- Conductive
- Resistive
- Sensitive

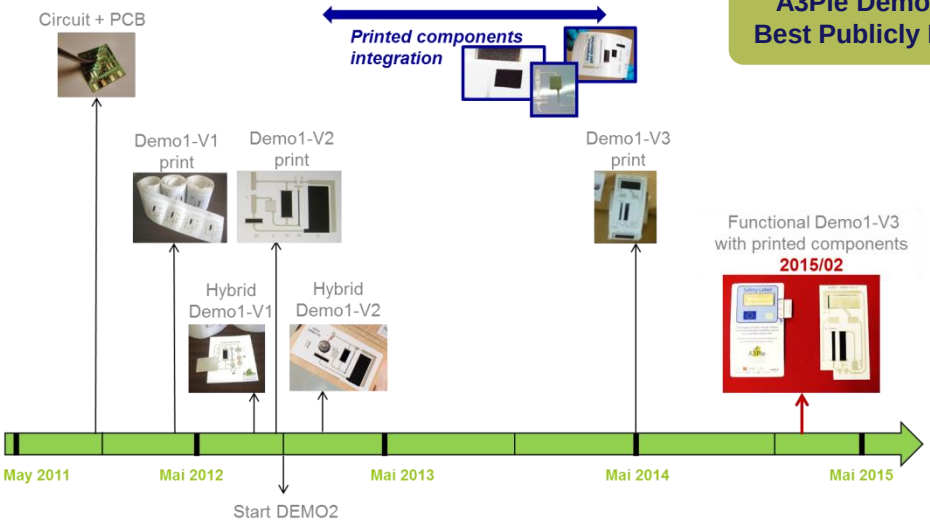
Hybridization:

- Display film (printed)
- Transistor
- Battery (commercial TFB)

The **Demo1** is an "on/off" device that gives information about presence of dangerous gas. The label could **detect H_2S** deathly gas emitted by defector on heater or chemical plant combustion. However, temperature sensor replaces gas sensor for live demonstration on a show room.

At 2015 LOPEC edition, **A3Ple** participated on the *"OE-A Competition for Multifunctional Demonstrator based on Organic and Printed Electronics"*,
The Gas Detecting Safety Label A5/A0, was awarded by the OE-A jury, with **Best Publicly Funded Project Demonstrator**.
(http://www.oe-a.org/article/-/articleview/150569)

A3Ple Demo1 awarded with the prize for Best Publicly Funded Project Demonstrator.



QR for Demo1 video

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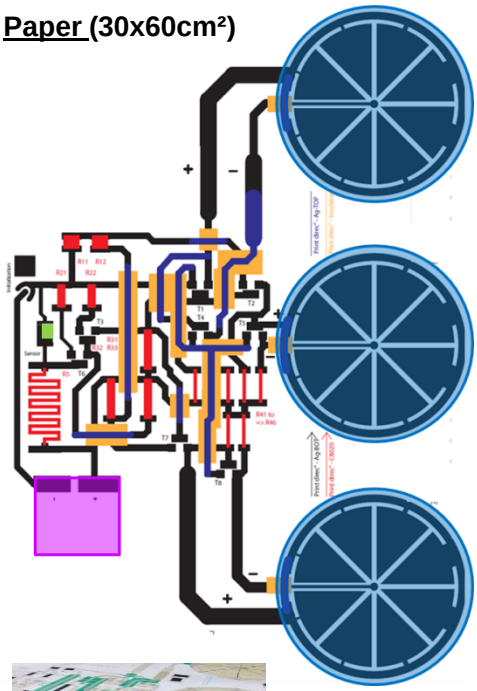
The **Demo2** is a paper poster (A0 format) able to distinguish 3 levels and inform witch one is reached. This final design takes into account physical constraints for electronic behaviour and printing issues; and graphic identity of the real product as poster size, display dimension, how to read/understand the colour change, etc…)

Paper (30x60cm²)



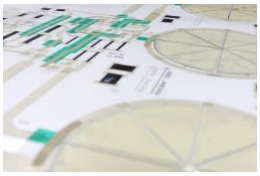
A3Ple Demo 2
Air quality monitoring

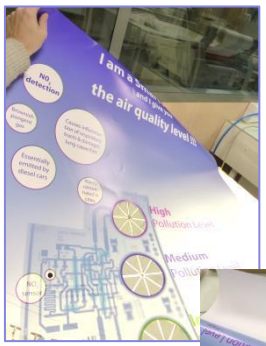
Inks:

- Conductive
- Resistive
- Insulator & conductive
- Sensitive

Hybridization:

- Display film (printed)
- Transistor
- Battery (commercial TFB





A3Ple Demo2 poster at OE-A booth, LOPEC 2015.

QR for Demo2 video

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Message from the coordinator

Véronique Morin (CTP)

Véronique Morin started her career as R&D Engineer in Kymmene company before joining CTP in 1991 as Research Engineer in the field of Surface treatment and Printability. Since 2005 she has served as Research & Development Director.

"The twelve **A3Ple** partners joined their knowledge and experience to pave the way to the future of the promising emerging market of printed electronics on paper substrates.
Most of the technical developments performed at laboratory scale on passive and active components, such as sensors, transistors, memories, displays and battery, and online monitoring/quality check tools were efficiently transferred at industrial scale on a full-scale commercial printing machine.
The award of the Best Publicly Funded Demonstrator received by the OE-A jury at the 2015 LOPEC conference for the safety label outlines the benefits of the deep collaboration between RTO's and industry all along the 4 year of the project.

No doubt that the winning team is ready for future new fruitful adventures!"

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