Enabling Mixed Societies of Communicating Plants and Artefacts

Results in Brief

Determining plant suitability to light or shade

A method for ascertaining whether a plant is best suited for shade or light conditions has been developed.

DIGITAL ECONOMY

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The PLANTS project has focused on the development of interactive, scalable mixed communities for conveying the link between artefacts and plants. It is foreseeable that the spaces in which we live will become furnished with countless 'artefacts'. These artefacts will be capable of sensing and actuating their environment to enable localised computation, communication and collaboration amongst one another.

Until now, this aim has fallen short in that the link between the ambient electronics environment and nature has been missing. This is because research has been conducted in enclosed laboratories, offices and artificial living spaces without any meaningful interfaces to nature. Therefore synergies between living organisms and ambient systems which are able to observe their unpredictable behaviour needed to be created. PLANTS has done just that focusing specifically on plant life.

In regards to plants purchased from garden centres and nurseries, the buyer usually relies on the producer for information about conditions suitable to the plant. In most

cases, the plant is not grown in the most suitable conditions because of space and production pressure limitations. Therefore commercial shade and light plants can show indistinguishable Electron Transport Rate (ETR) readings.

Given this, a method was developed to determine plant suitability to light or shade using ETR threshold levels upon purchase. An ETR curve is obtained through the use of chlorophyll fluorescence which is then analysed to provide the inflection point of the curve. This is useful for interior and exterior landscapers in the determination of the best plant positioning.

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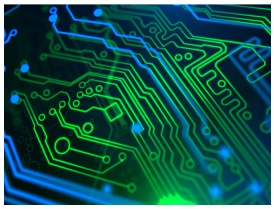

A big step forward in the manufacture of 3D-printed circuit boards

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PLANTS

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