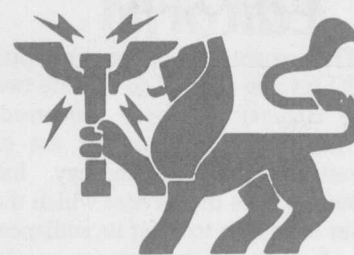


ENG INF

The Quarterly For BBC Engineering Staff



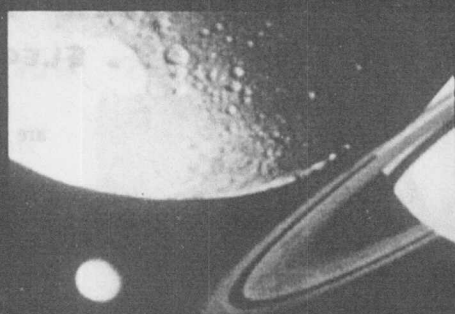
CEEFAX P702 BBC Experimental

NEWS OF THE FUTURE

The Voyager 2 spacecraft stunned scientists with pictures of Saturn, the mysterious ringed planet.

But the graphic on this page is remarkable for quite different reasons.

It shows Saturn and two of its moons as teletext viewers of the future will be able to see them.



More in a moment

The BBC has made the first public broadcast of high quality still pictures by means of the UK Teletext system. The broadcast high-quality pictures and other enhancements were demonstrated to a technical committee of the European Broadcasting Union (EBU) on February 11th, and at a meeting of the Institution of Electrical Engineers (IEE) on March 8th. The UK teletext system has, for many years now, represented an efficient and rugged way of transmitting, receiving and decoding data for display on a television receiver. None of the efficiency or ruggedness is lost in the transmission of the enhancements.

The recent transmissions were the culmination of several years work by engineers from Special Projects Section at Research Department. The equipment used to generate the enhancements contained a teletext generator, a microcomputer system and a high-quality digital picture store, whose content was displayed on a screen. On the UK television standard (System I) the store operates at the CCIR recommended sampling rate of 13.5 MHz, with 8-bit Red, Green and

Blue (RGB) samples, occupying some 1.2 M bytes of storage space. This represents an active picture size of 702 by 576 pixels, or picture elements, to fill the television screen with the high-quality picture. For the experimental transmission, a montage of the startling pictures of Saturn taken from the Voyager 2 spacecraft was used to demonstrate the capability of the system. The picture was fed from a conventional 35 mm slide scanner into the digital picture store. After sampling at 13.5 MHz it was fed to a microcomputer and data generator that sorted the information into a form suitable for transmission. The special equipment was used temporarily to replace two of the conventional four line Ceefax signals on BBC 2 for the transmission.

The Voyager 2 picture was included in a series of pages that displayed an improved character font. The new character generator in the decoding equipment enabled the characters to be more easily read, with individual characters being well spaced

'continued on Page 3'

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