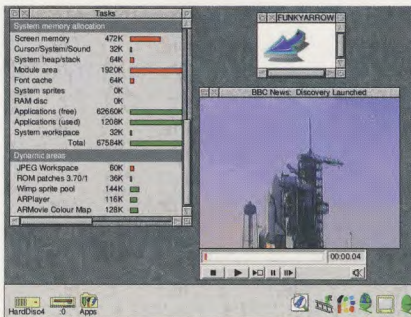# Acorn Technology – An Overview

Introduction

Acorn is one of the leading suppliers of network computer technology in the world today. With over 500 man-years' experience in developing for the ARM™ processor alone, Acorn has an unparalleled track record in developing low-cost, high-performance, networked solutions which do not require localised storage.

Acorn has experience in building highly-specialised Network Computers (NCs) in a variety of form factors, such as interactive television (low-and high-bandwidth), office-based intelligent terminals, portables (PDA), fax and games systems.

Available today to shape your tomorrows

Acorn currently has a range of licensable technologies that provide time-to-market, feature and cost advantages to manufacturers, integrators and solution providers.

These technologies are designed for applications used in the home, office and while on the move, and require little or no maintenance.

Acorn core technologies

Hardware designs

Acorn is ready to license a wide range of off-the-shelf solutions (such as the Acorn NC (Network Computer) and Acorn coNCord), customise specifications to suit individual customer requirements, or develop specific turnkey solutions from basic concepts.

Operating systems

Acorn RISC OS is a stable, scalable, multitasking operating system designed to be run from ROM. As such, it is ideal for embedded applications and can be 'enriched' as required with a choice of system-wide extensions, network stacks and specific applications.

Acorn

Acorn applications

Acorn has an extensive range of applications which have been optimised for execution from ROM. This has the advantage of minimising RAM usage, and allowing more applications to be run at any given time. Such applications include HTML 3.2-compliant Web browsers with Java, Shockwave and a range of other plug-ins, MIME-compliant email clients, newsreaders, word processors and audio/video codecs.

Other key technologies

In addition to customisable user interfaces and applications, Acorn is able to offer ASIC, product case and device driver design and development.
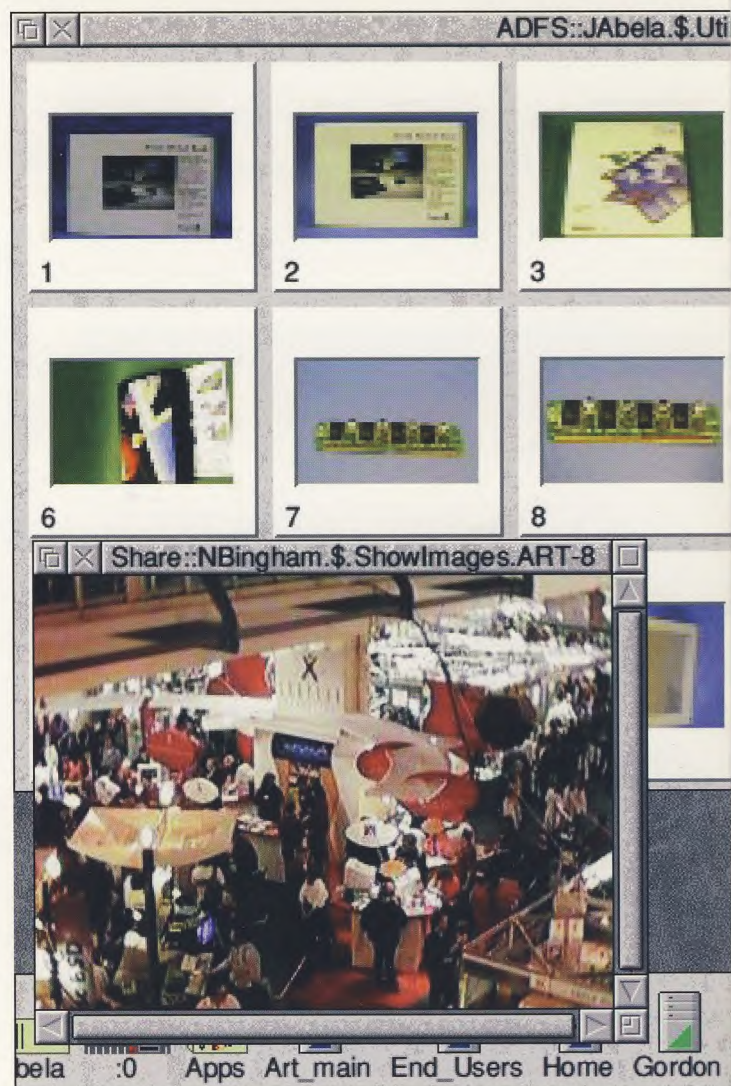
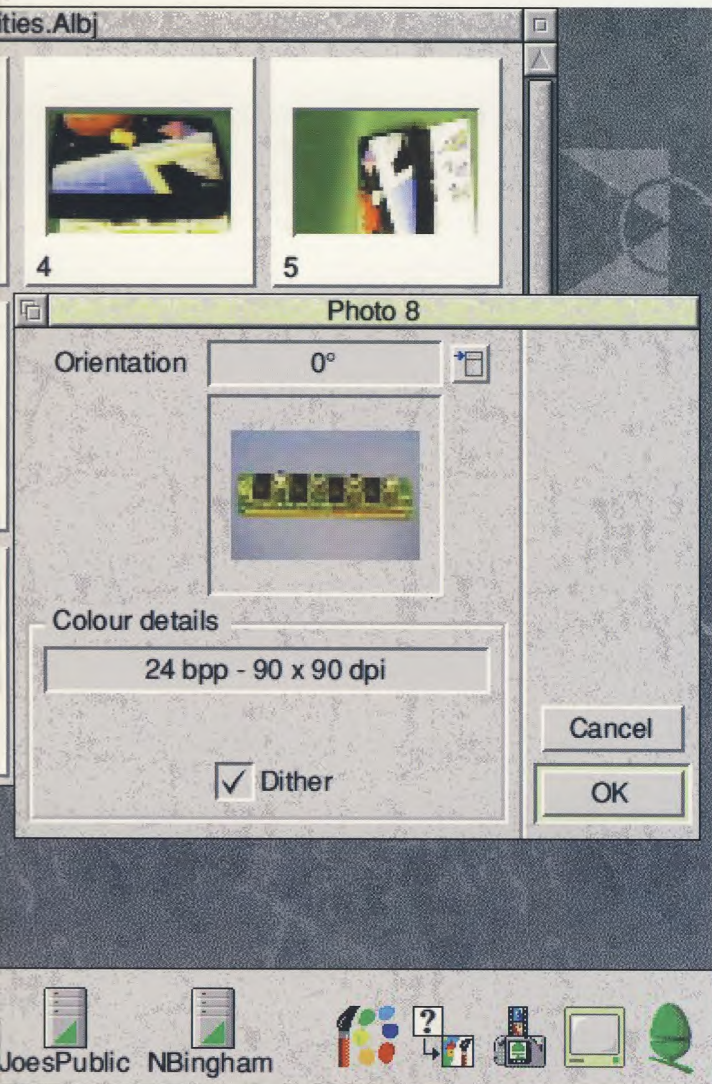**The following key Acorn technologies are currently available:**

Acorn TVCentric™ technology

Acorn has developed a unique hardware/software solution which has resulted in some of the best TV-based display technology available in the world today. This technology, which has been developed for NTSC- and PAL-configured television sets, provides anti-aliased fonts for high-definition text and anti-twitter software for stable text and image display on interlaced displays.

Acorn's TVCentric technology is available as a component or as part of complete solutions. These include Acorn RISC OS or NCOS™ and Acorn's hardware designs (see Acorn TVCentric overview sheet).
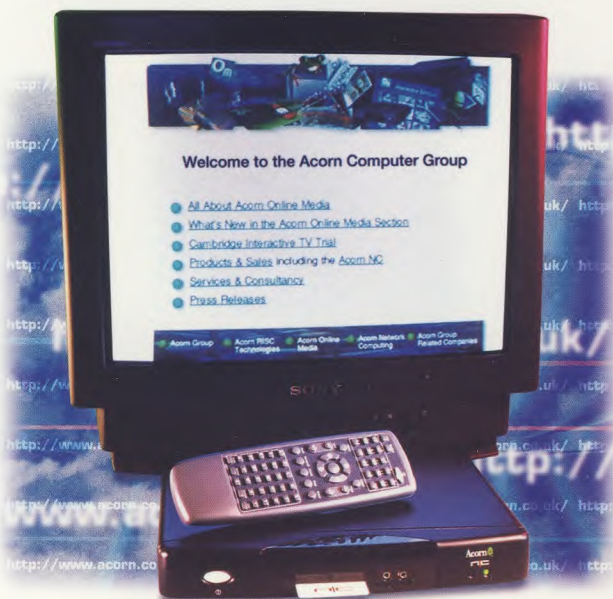
Acorn NC

The Acorn NC offers a completely functional network computer design, incorporating a cost-effective, highly integrated ARM processor (7500FE). It is provided with a choice of operating systems, a selection of filing systems, network stacks, graphical user interfaces and applications. Acorn NC can be shipped with TVCentric (see Acorn Home NC datasheet) or office-oriented applications (see Acorn Corporate NC datasheet).

Acorn Fast NC

The Acorn coNCord design delivers the same benefits in terms of off-the-shelf availability as the Acorn NC, but with the additional performance benefit of an integrated 200MHz StrongARM processor (see Acorn coNCord data sheet).

Acorn Corporate NC

The Acorn Corporate NC is based on Acorn hardware designs and RISC OS, and adds application compatibility (including Web browsers, email, news, Telnet packages, word processors and spreadsheets) for current users of UNIX- or Microsoft Windows-based systems through the use of ROM-based X-Window support (see the Acorn Corporate NC datasheet).

Acorn NCLite

Acorn NCLite is a low-cost network computer design which has been developed for use with composite video feed-based television sets, although support for SVGA monitors can also be provided. S-Video connectors are also available, together with stereo line jacks for audio support. NCLite is supplied with Acorn's TVCentric display technology and can be sourced with the same broad range of user interfaces and applications as other Acorn hardware designs (see Acorn NCLite datasheet).

Acorn NewsPAD*

Acorn NewsPAD is a portable, multimedia system technology demonstrator with touchscreen input. It is capable of achieving low (external and PCMCIA-based modem) and high speed (Ethernet and infa-red DA) Intranet and Internet access (see Acorn NewsPAD datasheet).

Other available technologies

Other technologies which are licensable from Acorn include:

- **A7500 development systems** – which provide a 'target system' for software developments based around ARM™ processors

- **Acorn macro cells** – a broad range of discretely licensable macro cells, including MPEG decoders, ARM bus arbitration and PCMCIA

- **an ARM-based PCMCIA controller** – which comes complete with programmable card access timing, address mapping, buffer control and card voltage control

- **Time code** – which provides comprehensive multimedia synchronisation, supports SMPTE and MTC, and delivers frame rates between 1 and 1,800 per second

- **Acorn 'Stork'** – a compact, portable, RISC-based sub-notebook computer with keyboard input and trackerball pointing device, and comprehensive networking options

- **Acorn networking protocols and filing systems** – which include support for IP, UDP, NetBEUI and AppleTalk, together with NFS, MacFS, LanManFS and NTFS filing systems

- **multimedia PoS terminals** – which include comprehensive multimedia performance, together with a user-friendly user interface design

- **ARMovie audio and video codecs** – which include support for Acorn Replay, VXtreme, H263, AVI and MPEG, together with WAV, AU, AIFF and ADPCM and integrated low bit rate (Internet use) integrated audio/video codecs and MIDI synthesis.

* EU collaboration