AccessionIndex: TCD-SCSS-T.20150112.006
Accession Date: 12-Jan-2015
Accession By: Prof.Doug Leith
Object name: Atari 400XL
Vintage: 1983
Synopsis: Home game computer. Model: 400U, S/N: BX 078, 050 127044.

Description:
The Atari 400 and 800 were a series of home game computers manufactured by Atari Corporation, first introduced in 1979.

Trivia: The 400 was internally known as "Candy" and the 800 as "Colleen", after two Atari secretaries.

Both the 400 and 800 were based on MOS Technology's *6502* 8bit CPU, 8kB RAM, and two programmable custom ASIC coprocessors (*ANTIC* and *GTIA*, principally designed by Jay Miner, Joe Decuir and George McLeod) which provide support for sprites and smooth multidirectional scrolling using direct memory access (DMA), plus another ASIC (*POKEY*, designed by Doug Neubauer) to provide four channels of audio and serial I/O (via the Atari *SIO* serial bus). These ASICs made their graphics and sound more advanced than most of their contemporaries. They had two plug-in daughter-boards each holding 8 x 4kx1 RAM, and slot(s) for user-installable cartridge ROMs that included a set of low-level routines for accessing floppy disk drives to boot Atari *DOS* disk operating system. Atari's *SIO* bus allowed peripherals to be daisy chained together using an early form of plug-n-play. Each peripherals had its own IDs, and could provide drivers to the Atari 400 or 800 during the boot process. Except for joysticks and an external composite display, all of their functions were integrated into a compact cast aluminium case. The highlight of presentations and demonstrations was Atari's own game *Star Raiders*.

The 400 was introduced as a child-friendly home games computer with a membrane keyboard resistant to liquid spills. The Atari 400XL, first introduced in 1983, was an improved version of the Atari 400 within approximately the same form factor. Its memory address space was expanded to 64kB, and optional extended RAM or ROM could be bank-switched into this 64kB address space. It replaced the membrane keyboard with a traditional full-travel keyboard.

This item includes a BASIC cartridge 'for use with console keyboard Atari CXL4002'. It also includes documentation and other software, see the Literature category in this catalog.

Many thanks to Professor Doug Leith for donating this item.

The homepage for this catalog is at: https://www.scss.tcd.ie/SCSSTreasuresCatalog/
Click *'Accession Index'* (1st column listed) for related folder, or *'About'* for further guidance.
Some of the items below may be more properly part of other categories of this catalog,
but are listed here for convenience.

Accession Index	Object with Identification
TCD-SCSS-T.20150112.006	Atari 400XL. Home game computer. Model: 400U, S/N: BX 078, 050 127044. 1983.
TCD-SCSS-T.20241031.002	Atari ST. Personal computer, S/N: ???? 1985.
TCD-SCSS-V.20121208.473	Atari User vol.2 no.2 June 1986. 1986.

References:

1. Wikipedia, *Atari 8-bit computers*, see:
   https://en.wikipedia.org/wiki/Atari_8-bit_computers
   Last browsed to on 2-Nov-2024.

2. Wikipedia, *Atari 400*, see:
   https://de.wikipedia.org/wiki/Atari_400
   Last browsed to on 2-Nov-2024.

see our centerfold for news about the 4th West Coast Computer Faire

The Intelligent Machines Journal

Price: 75 cents | 345 Swett Road, Woodside, CA 94062, (415) 851-7075 | 79 Feb 7, Issue 2 – Final Edition

ATARI ANNOUNCES TWO NEW PERSONAL COMPUTER SYSTEMS

Atari previewed two new personal computer systems at the Winter Consumer Electronics Show held in Las Vegas this January. Both are designed for entertainment, education, and business and household management. Provisions have also been made for the addition of peripheral devices.

The Atari 400 is the lower priced of

the two models. It is based on the 6502 processor, and comes with 8K of RAM. There are an additional 8K of ROM which can be expanded to 16K by adding a user installed solid state program cartridge.

The video display of the Atari 400 is 16 colors in 8 luminance levels, and is connected to channels 2 or 3 of a home television set. Multiple user definable graphics modes provide resolution up to 320 x 192. There are also four audio channels for various sound generation options.

The keyboard is a 54 key monopanel type, with upper and lower case ASCII, various graphics keys, and four function keys.

In the Computer Aided Education applications, the system uses a two-track character arrangement whereby the cassette's audio track plays through the television while the digital track draws graphics and writes on the screen, according to Atari. Atari is also building up an educational library which includes such subjects as Algebra, Auto Mechanics, Spanish, Statistics, Carpentry, Basic Electricity, and Zoology. A games library is also being supported.

Although an availability date has not yet been announced, the unit is expected to retail for approximately $500 when it does go on the market.

The top-of-the-line unit is the Atari 800, which will probably sell for approximately $1000, according to sources close to the company. It will be shipped with 8K of RAM, expandable to 48K. As with the 400, it will have 8K of internal ROM, but will have two cartridge slots for an additional 16K of ROM. The company says that the system will support up to four diskette drives, but details about controllers or interfaces were unclear. The information provided by Atari does say that the two cartridge slots do provide for Atari Basic, Atari Disk Basic, or alternate languages.

The keyboard on the Atari 800 appears to be the same layout as on the 400, but the keys are full typewriter-like keys. Also, the cassette recorder is included with the unit in this model.

Watch *IMJ* for further details on the Atari product line.

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MATTEL'S INTELLIVISION: A NEW COMPUTER-BASED ENTERTAINMENT SYSTEM

Mattel Electronics division of Mattel, Inc., the toy manufacturer, introduced a new personal entertainment system at the recent Winter Consumer Electronics Show in Las Vegas. Called Intellivision, the system in its simplest form consists of a "master component" with two hand controllers.

The master component accepts games and education programs stored on ROM packs, and is capable of color video as well as sound effects, including music in three-part harmony. Each of the two attached hand controllers contains a fire/launch button, an object control dial for moving objects about on the screen, and a twelve-key key pad on the controller.

Each game or other program on ROM comes with a key pad overlay, designating which keys supply which functions for each particular program. When not in use, the hand controllers nest neatly in slots in the top of the master component.

There will be available an add-on keyboard, which will allow expansion of the system to include home computer applications. It will consist of a 64 key keyboard, a cassette drive, and a microphone for use with programs featuring audio in-

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MICRO-BASED SYSTEM TO DETECT FORGERIES

by Tom Williams

Advances in automatic signature verification may speed the proliferation of automatic teller machines (ATMs) which will be able to cash normal paper checks rather than utilizing the cards and personal identification numbers now required for such services. According to Dr. George Sziklai and John Schick, Opticode, Inc., of New Orleans, Louisiana, has developed a system which uses methods developed for determining the composition of distant stars to analyze signatures.

Called Cryptocheck, the new technology is an electronic handwriting expert combined with a cryptographer. Cryptocheck analyzes a signature to pick out the stylistic elements that make it unique, puts these elements into a coded form that can be printed on a customer's check, and then automatically examines a handwritten signature to see if it has the individuating characteristics. Signature verification is performed by a scanner together with – for comparison purposes – a microcomputer. The scanner/microcomputer is designed for use in conjunction with MICR reader/sorters and automated teller machines. Unlike certain equipment of IBM's and others, it stands alone, requiring no central memory or transmission network.

Banks beginning to adopt bulk file/cycle sorting to expedite the processing of checks are realizing that the saving in time

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CRAIG INTRODUCES M-100 TRANSLATOR AND INFORMATION CENTER

To help Americans communicate in the five languages they are most likely to need, Craig Corporation, of Compton, California, introduced its new M-100 Translator and information center at the

Winter Consumer Electronics Show in Las Vegas. The M-100 is a pocket-sized unit with the ability to provide instant translations at the push of a button.

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GRAFIX ™ ACCOMPANIES BALLY COMPUTER INTRO

A custom computer programming language featuring words, symbols, music, and graphics, was introduced at the Winter Consumer Electronics Show in Las Vegas, by Bally Consumer Products division. Called Grafix ™, the new programming language was developed by Bally for use in its new Bally Computer System.

A decade in development, the new language is the offspring of Bally Basic and Grass, the graphics language used to create the special computer effects in the movie, "Star Wars."

Grafix is described by Bally as the first graphics computer language designed specifically for consumers. Utilizing the 256-color capability of the Bally Computer System, the language offers home programmers many unique features:

- The language is self-teaching. Programming commands describe themselves to users upon request, with the simple instruction "help!".
- The language is extensible, i.e., user-expandable. Although the language contains instructions in common with Basic, it also contains a vocabulary of graphics commands that are unique. And, an indefinite number of new commands can be added by the home programmer.
- The language permits multi-level programming. This feature allows users to write one program while running another, thus allowing a number of independent programs to operate on the screen simultaneously.

According to a Bally spokesman, commercial art, computer movies, flight simulation, and classroom instruction are but a few of the software possibilities for Grafix.

Grafix was developed by a Chicago-based team of programming engineers: Dr. Tom DeFanti, Professor of Computer Sciences at the University of Illinois; Nola Donato, a University of Illinois programming consultant; and Jay Fenton, Senior Programming Engineer of Dave Nutting & Associates, a Bally subsidiary.

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Figure 1: Atari 400XL advertisement, InfoWorld, 7th February 1979.

Figure 1: Atari 400XL.