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Subject: Funny Mode and SOS - Implications for the Apple ///

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Abstract

The purpose of this document is to outline some of the potential costs associated with DOS 3.3 applications operating in Apple /// native mode (the so called "funny mode"). It is my contention that tacit approval of this software environment threatens the financial success of the Apple /// system, both in the short and the long terms.

Introduction - Historical Notes

Funny mode is a "not so new" software environment that allows Apple II DOS 3.3 software to operate in the Apple ///'s native mode. The primary difference between funny mode and emulation mode is that funny mode software has access to all of the ///'s memory, its control registers (bank register, zero page register, environment register) as well as the i/o bank and Apple /// ROM, all of which cannot be accessed in emulation mode. Funny mode was developed at Apple for the purpose of initially testing breadboard Apple /// hardware. Subsequently, it was used for the purpose of writing demonstration programs to illustrate the hardware capabilities of the machine in advance of working native mode software products (SOS, BUSINESS BASIC, PASCAL...).

Emulation mode, an approximate subset of the Apple ///'s native mode, is a near duplicate of a 48K Apple II with two disk drives. It was developed to enable Apple to capitalize upon the existing base of Apple II software, while helping to free new systems software from the need to provide Apple II backward compatibility. Emulation mode was deliberately designed as a separate hardware environment which would require minimal support from Apple.

Although both the funny mode and emulation mode software environments began as low cost efforts to meet short-term goals, "hardware testing" and "instant application software," respectively, both have added significant costs to the development of the Apple ///. Funny mode has created an environment that is attractive to Apple II developers who wish to use the additional hardware power of the /// without learning a new system. Emulation mode has cost the company several man years in development, testing and support, and has severely handicapped the Apple ///'s hardware design, e.g. choice of processor, i/o mapping, video capability, etc.

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