

EXHIBIT B: MILESTONES AND DELIVERABLES FOR MICROCOSM

Note: the notation "(L->Q)" means a deliverable that Lucasfilm (LFL) delivers to Quantum; the notation "(Q->L)" means a deliverable that Quantum delivers to Lucasfilm; the notation "(joint)" means a deliverable that consists of two interdependent components that Lucasfilm and Quantum exchange with each other; the notation "C64" refers to the Commodore 64 computer.

CONTRACT SIGNING	PAYMENT TO LFL	\$25,000
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DECEMBER 15, 1985--

MILESTONE: Graphics tools -- completion of software to enable an artist/ animator to design and compose imagery and animation of avatars and objects.

DELIVERABLE (L->Q): Videotape demonstration of the graphics tools in action, showing what the software does and how it is used.

MILESTONE: Graphics driver -- software to render imagery and animate avatars and objects complete as a package of 'standalone' routines that are fully functional but not integrated into any finished system.

DELIVERABLE (L->Q): Videotape demonstration of the animation driver in action, showing its speed and approximate capabilities in isolation.

MILESTONE: Communications routines -- existing C64 software for communications with the Q-Link host is available for incorporation into LFL generated systems.

DELIVERABLE (Q->L): Source code for C64 routines with accompanying documentation (in machine-readable form).

JANUARY 15, 1986--

PAYMENT TO LFL: \$25,000

MILESTONE: Primitive communications -- C64 able to exchange trivial messages with the host system.

DELIVERABLE(joint): LFL C64 system is able to call up Q-Link and initiate communications under program control; the C64 can send messages to the host which the host echoes; the host can in turn send messages to the C64 which the C64 echoes.

MILESTONE: Host development system -- Host system is available to LFL programmers for programming, testing and installation of object modeling software in the developmental host database.

DELIVERABLE (Q->L): Login id's, phone numbers, and any other information and measures necessary so that LFL programmers can remotely access Quantum's development system for software development use.

MILESTONE: Object definitions -- the basic set of objects which constitutes the MicroCosm fantasy experience is defined.

DELIVERABLE (L->Q): Definition document listing the contents of the basic object set including a description of the name,

appearance, purpose and behavior of each object that Lucasfilm intends to implement as part of this project.

FEBRUARY 15, 1986--

PAYMENT TO LFL: \$25,000

MILESTONE: Primitive host database processor -- the object-oriented behavior invocation mechanism in the host is functional.

DELIVERABLE (Q->L): LFL C64 is able to call up Q-Link and initiate communications with the MicroCosm host database processor; it is further able to send requests to dummy test objects and receive appropriate responses via the object/message protocols defined in the system specifications; the database is made available on the Quantum development system for LFL programmers to install and test object modeling software.

MILESTONE: Partial object artwork -- the first batch of imagery for displaying objects and scenes on the C64 screen.

DELIVERABLE (L->Q): Videotape and possibly screen photographs of artwork and animation on the screen of the C64 portraying avatars and many of the objects in the basic object set.

MARCH 15, 1985--

PAYMENT TO LFL: \$25,000

MILESTONE: Graphics and animation -- the graphics and animation subsystem of the C64 MicroCosm implementation is

finished to a first approximation (i.e., it works though there may still be a few bugs in the system).

DELIVERABLE (L->Q): Videotape of graphics and animation routines being put through their paces on the C64.

MILESTONE: More artwork -- further imagery for objects and scenes on the C64 screen.

DELIVERABLE (L->Q): Videotape and/or screen photographs of artwork and animation on the C64 screen.

MILESTONE: Some functional objects -- the first batch of objects (including both C64 and host resident components) is working.

DELIVERABLE (L->Q): Videotape demonstrating player interaction with objects involving the C64 acting in concert with the host.

APRIL 15, 1986--

PAYMENT DUE LFL: \$25,000

MILESTONE: Finished host database processor -- the baseline host system software is completed.

DELIVERABLE (Q->L): Complete host database system is available to LFL programmers for final testing.

MILESTONE: Rest of objects -- more or less complete object set is working.

DELIVERABLE (L->Q): Videotape demonstrating player interaction with the

MicroCosm system; bootable C64 diskette containing complete pre-release C64 portion of system; complete pre-release host database installed on Quantum's development machine.

MILESTONE: Beta-test test procedures defined, and timing of beta-test developed.

DELIVERABLE (Q->L): Complete beta-test procedures and evaluation plan beta-test version of MicroCosm.

MAY 15, 1986--

PAYMENT DUE LFL: \$25,000

MILESTONE: System integration -- complete beta-testable system is finished.

DELIVERABLE (L->Q): Bootable C64 diskette containing beta-release of C64 portion of system; host portion of system installed on host machine.

MILESTONE: Preliminary player documentation -- documentation necessary for players to use the beta-release C64 MicroCosm system on Q-Link.

DELIVERABLE (L->Q): Text and illustrations for preliminary MicroCosm player's manual.

MILESTONE: Beta-test release -- release of complete system to a limited and carefully selected set of players for purposes of in situ testing and debugging.

DELIVERABLE (Q->L): List of players participating in beta-test use of MicroCosm (these players have received diskettes of the beta-release C64 system software, documentation, and access to the beta-release host system); player feedback channels must be provided and LFL programmers should have direct access to the player feedback information so received in order to proceed with debugging and tuning.

JUNE 15, 1986--

PAYMENT TO LFL: \$25,000

MILESTONE: Complete system integration -- complete set of objects entirely functional and full system operating smoothly.

DELIVERABLE (L->Q): Diskette containing most up-to-date version of C64 system and matching host system software installed in host.

MILESTONE: Avatar customization package -- standalone C64 program to enable a player to interactively customize the appearance and properties of his MicroCosm avatar.

DELIVERABLE (L->Q): Diskette containing C64 Avatar customization program.

MILESTONE: Turf customization package -- standalone C64 program to enable a player to interactively customize the content and layout of his turf region(s) in the MicroCosm world.

DELIVERABLE (L->Q): Diskette containing C64 Turf customization program.

JULY 15, 1986--

PAYMENT DUE LFL: \$25,000

MILESTONE: Final player documentation -- documentation necessary
for players to use the final release of the C64
MicroCosm system on Q-Link.

DELIVERABLE (L->Q): Text and illustrations for the release edition of the
MicroCosm player's manual.

MILESTONE: Final system software -- the absolute last (until
the next rev) most up to date, most debugged and most
finely tuned version of the software.

DELIVERABLE (L->Q): C64 diskette containing full C64 software package plus
final release object set installed on Q-Link host.

MILESTONE: PUBLIC MICROCOSM SYSTEM RELEASE--

DELIVERABLE (Q->L): System made available to paying customers on Q-Link.

AUGUST 15, 1986--

PAYMENT TO LFL: \$25,000

MILESTONE: Final reports and documentation-- the last bits of
paperwork and documentation before the system can
truly be said to be finished.

DELIVERABLE (joint): Quantum and LFL each provide a final report detailing
the final disposition of the project.

