



07-CV-00631-EXH

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**EXHIBIT A**

**(OEM) LICENSE AND SOFTWARE DEVELOPMENT AGREEMENT**

This agreement (this "Agreement") is made and entered into as of this 3 day of ~~October~~ <sup>November</sup> 2001.

**by and between:**

1. Amiga Inc. (hereafter: "Amiga"), a State of Washington, U.S.A. corporation with its administrative seat at 34935 SE Douglas Street, Snoqualmie, WA 98065, USA

**and**

2. Hyperion VOF (hereafter: "Hyperion"), a Belgian corporation with its administrative seat at Brouwersstr. 1B, B-3000 Leuven;

3. Eyeteck Group Ltd. (hereafter: "Eyeteck"), an English corporation with its administrative seat at The Old Bank, 12 West Green, Stokesley, N. Yorkshire, TS9 5BB, England.

**RECITALS**

**WHEREAS** Amiga intends to release a new version of its Classic Amiga operating system tentatively called "Amiga OS 4.0";

**WHEREAS** Amiga has decided to contract with Eyeteck for the development of the Amiga One product;

**WHEREAS** Hyperion has partnered with Eyeteck Ltd. in the AmigaOne project;

**WHEREAS** the successful roll-out of the AmigaOne hardware hinges in part on the availability of Amiga OS 4.0;

**WHEREAS** Amiga has decided to contract with Hyperion for the development of Amiga OS 4.0;

**NOW, THEREFORE**, for good and valuable consideration, receipt and sufficiency of which is hereby acknowledged, and intending to be legally bound, the parties hereto agree as follows:

**Article I.  
DEFINITIONS**

**1.01 Definitions.** For purposes of this Agreement, in addition to capitalized terms defined elsewhere in this agreement, the following defined terms shall have the meanings set forth below:

"Amiga One" means the PPC hardware product developed by Escena GmbH for the Amiga One Partners, initially intended to operate in conjunction with an Amiga 1200;

"Amiga One Partners" means Eyeteck and Hyperion collectively;

"Amiga OS Source Code" means the Source Code of the Classic Amiga OS including but not limited to the Source Code of Amiga OS 3.1, 3.5 and 3.9;

"Classic Amiga OS" means the operating system owned and developed by Amiga Inc. and largely based on the

operating system shipped with the Commodore Amiga line of computers sold in the 1980's and early '90's;

"Confidential information" means any business and technical information of a party hereto that is treated as *confidential by such party and furnished to the other party*, and which includes but is not limited to computer programs, Source code, Object code, algorithms where such information, if in writing, is identified in writing to the other party as confidential prior to or concurrently with the transmission of such information, and, if conveyed orally, is identified orally as confidential prior to or concurrently with the transmission of such information and confirmed in writing within seven (7) days thereafter. Source Code is hereby designated as Confidential Information.

"Object Code" means software in a machine readable form that is not convenient to human understanding of the program logic, and that can be executed by a computer using the appropriate operating system without compilation or interpretation. Object Code specifically excludes Source Code.

"OS 4.0" means the version of the Classic Amiga OS developed by Hyperion pursuant to this Agreement with the functionality described in Annex I hereof;

"OS 4" means any version of the Classic Amiga OS developed by Hyperion pursuant to this Agreement;

"Software" or "the Software" means the Source Code of Amiga OS 3.1 and the upgrades of Amiga OS 3.1 including but not limited to OS 3.5 and 3.9 and associated "Boing Bags";

"Source Code" means software when written in a form or language understandable to humans, generally in a higher level computer language, and further including embedded comments in the English language.

"Target-Hardware" means the PPC based hardware developed and marketed for the Amiga platform including but not limited to the hardware developed and marketed by Phase 5, DCE and the AmigaOne hardware developed by Escena under contract with the Amiga One Partners.

## ARTICLE II. OBLIGATIONS OF THE AMIGA ONE PARTNERS; APPOINTMENT

**2.01 Appointment.** Amiga hereby grants the Amiga One Partners a right and license to use and modify the Software and an exclusive right and license to market and distribute OS 4 as a standalone version for the Target Hardware and as an OEM version shipped with the Amiga One. Amiga furthermore grants the Amiga One Partners a right and license to use the Amiga trademarks in conjunction with the Amiga One. Hyperion shall develop Amiga OS 4.0 for the Target-Hardware with the minimal feature-set set out in Annex I and pursuant to the development guidelines set out in Annex I. Amiga acknowledges and accepts that Hyperion will bring in third party contractors (Annex II) to fulfill its contractual obligations.

**2.02 Timeline.** Hyperion shall use best efforts to ensure that Amiga OS 4.0 is ready for release before March 1, 2002.

**2.03 Royalties.**

(A) **Standalone version.** Other than for OS 4.0 for which no royalties shall be due by Hyperion, Hyperion shall pay Amiga a royalty of 20 USD for each standalone version of any subsequent versions of OS 4 developed by Hyperion pursuant to this Agreement.

(B) **OEM version.** Eyetech shall pay Amiga a royalty of 25 USD per unit of Amiga OS 4, said royalty shall moreover be considered payment in full for the Amiga One Partners right and title to use the Amiga trademarks in conjunction with the Amiga One.

(C) **Upgrades.** In the event upgrades are made available at a price which exceeds a reasonable amount for shipping and administrative costs, Hyperion and/or Eyetech shall pay Amiga a pro rata royalty which shall be calculated by comparing the suggested retail price (SRP) in Germany of a standalone version of OS 4 with the

*MAD [Signature]*

SRP in Germany of the upgrade package.

**2.04 Records and inspection.** During the term of this Agreement, the AmigaOne Partners shall deliver to Amiga bi-monthly reports within thirty (30) days after the end of bi-monthly period setting forth the sales of the OS 4. Following such bi-monthly report, accrued royalties shall promptly be wired to Amiga. Amounts of less than Two Thousand (2000) USD shall be carried over to the next bi-monthly period. The AmigaOne Partners shall maintain or acquire complete and accurate records of sales to permit the determination of the sums payable by the AmigaOne Partners to Amiga. The AmigaOne Partners shall, upon fourteen (14) days advance written notice by Amiga, permit reasonable inspection of such records by Amiga or its outside accountants. The finding of errors in such records shall not of itself constitute a material breach of this Agreement. Amiga shall bear all of its own costs of such inspection even if it finds errors in the Amiga One Partners' records unless the inspection reveals more than 5% underpayment on the part of one of the Amiga One Partners in which case said partner shall bear the costs of inspection which shall not be unreasonable.

**2.05 Interest.** Interest shall accrue on any delinquent amount owed by the AmigaOne Partners at the rate of one percent (1%) per month, or the maximum rate permitted by the law of the State of Washington, U.S.A, whichever is less.

**2.06 Ownership.** Amiga shall retain ownership of the Software. Other than the rights and licenses granted to the AmigaOne Partners and Hyperion and Eyetech individually, nothing in this Agreement shall be construed as limiting Amiga's right and title in the Software. At any time prior to the completion of OS 4.0 and no later than six (6) months thereafter and provided Amiga makes the payment pursuant to article 3.01 hereof, Hyperion shall transfer all Source Code, interest and title in OS 4.0 to Amiga to the extent it can do so under the agreements concluded with third party contractors. Hyperion shall use best efforts to secure the widest possible rights from third party contractors. Amiga hereby acknowledges and accepts that some third parties may only grant an Object Code license or may otherwise restrict the rights granted to Hyperion.

**2.07 Bankruptcy.** In the event Amiga files for bankruptcy or becomes insolvent, the Amiga One Partners are granted an exclusive, perpetual, world-wide and royalty free right and license to develop (at their sole expense), use, modify and market the Software and OS 4 under the "Amiga OS" trademark.

**2.08 Contingency.** In the event Amiga decides to halt development of the Classic Amiga OS for the Target Hardware, the Amiga One Partners are granted an exclusive, perpetual, worldwide right and license to develop, use, modify and market the Software and OS 4 under the "Amiga OS" trademark and at their sole expense. Royalties due to Amiga shall be calculated in accordance with article 2.03 hereof. Amiga shall be deemed to have halted development of the Classic Amiga OS in the event that no substantially new version of the Classic Amiga OS for the Target Hardware is released within 6 (six) months after the completion of OS 4.0 by Hyperion.

### ARTICLE III. OBLIGATIONS OF AMIGA.

**3.01** Amiga may, at any time but no later than six (6) months after the completion of OS 4.0, elect to pay Hyperion Twenty Five Thousand USD (25,000 USD) in order to acquire the Object Code, Source Code and intellectual property of OS 4.0 pursuant to and within the limits set out in article 2.06 hereof. Said payment will first be applied against the balance of any outstanding invoices by the AmigaOne Partners vis ~ vis Amiga. In the event Amiga does not elect to carry out the aforementioned payment, all ownership and title in the enhancements of and additions to the Software effected by Hyperion and its subcontractors pursuant to this Agreement, shall rest with Hyperion.

**3.02** Amiga shall provide Hyperion with all necessary Source Code and documentation to allow Hyperion to carry out its contractual obligations under this Agreement.

### ARTICLE IV. WARRANTIES AND INDEMNIFICATIONS

*P Amiga*

**4.01 Warranty and Covenant of Original Development by Amiga.** Amiga represents, warrants and covenants that: (a) it is and shall be the owner of all intellectual property rights in the Software under copyright, patent, trademark, trade secret, and other applicable law; (b) the Software delivered or licensed to the Amiga One Partners hereunder is and shall be of original development by employees of Amiga in the conduct of their duties as employees or by third parties who prepared such materials for Amiga pursuant to a contract between Amiga and said third parties and who assigned to Amiga his or its entire right, title and interest in the Software; (c) the Software does not and shall not infringe or otherwise violate any patent, copyright or trade secret of any third party anywhere in the world; (d) it has not received, as of the date of the delivery of the Software to Hyperion, actual notice of any claim that the Software or the use thereof infringes any intellectual property right of any third party anywhere in the world or that any third party has any proprietary interest in or to the software, or any invention, patent, work of authorship, copyright, trade secret, know-how or a similar right to the software.

**4.02 Indemnification.** Amiga shall indemnify and hold Hyperion harmless from and against all claims, suits, demands, actions, judgments, penalties, damages, costs and expenses (including attorney's fees and costs), losses or liabilities of any kind arising from a claim that the Software infringes a patent, copyright or other intellectual property right of any other person anywhere in the world.

**4.03 Indemnification.** Hyperion shall indemnify and hold Amiga harmless from and against all claims, suits, demands, actions, judgments, penalties, damages, costs and expenses (including attorney's fees and costs), losses or liabilities of any kind arising from a claim that OS 4.0 or any other version of the Classic Amiga OS developed pursuant to this Agreement infringes a patent, copyright or other intellectual property right of any other person anywhere in the world.

**4.04 Notice.** Amiga and Hyperion shall promptly notify the other party of any actions brought or claims asserted whose outcome may affect the rights granted to Hyperion and/or Amiga pursuant to this Agreement.

**4.05 Organization and Standing.** Hyperion is a corporation duly organized, validly existing and in good standing under the laws of the kingdom of Belgium. Amiga is a corporation duly organized, validly existing and in good standing under the laws of the State of Washington, USA. Eyetech is a corporation duly organized, validly existing and in good standing under the laws of England.

**4.06 Power to grant rights.** Amiga represents and warrants that: (a) it has the right, power and authority to grant the rights and licenses granted in this Agreement and fully perform its obligations hereunder; (b) the making and performance of this Agreement by Hyperion does not and shall not violate any separate agreement, right or obligation existing between Amiga and any third party; and (c) there are no outstanding liens, security interests or other encumbrances of any kind whatsoever in or to the Software or to any of the intellectual property rights therein.

#### ARTICLE V. CONFIDENTIALITY

(a) Each party may disclose to another party Confidential Information as may be necessary to further the performance of this Agreement. Each party agrees to treat another's Confidential Information in the manner prescribed herein.

(b) Amiga and the Amiga One Partners shall protect any other party's Confidential Information as follows:

(I) Except as specifically provided herein or otherwise permitted by the other parties in writing, any party may disclose Confidential Information of another party only to those employees and agents required to have knowledge of same to perform their duties pursuant to this Agreement. Each party shall require each such employee or agent to enter into a written non-disclosure agreement containing provisions substantially consistent with the terms hereof prior to the disclosure of Confidential Information to such employee or agent. Each party shall treat the Confidential Information of another party with the same degree of care as it protects its own Confidential Information, and in no event less than a reasonable degree of care.

(II) Except as may specifically be permitted herein, upon the termination of this Agreement, each party shall

return to the other, or, if so requested, destroy all Confidential Information of the other party in its possession or control, except such Confidential Information as may be reasonably necessary to exercise the rights that survive the termination of this Agreement.

(c) The foregoing obligations of confidentiality shall not apply with respect to any party's Confidential Information to the extent that it:

(I) is within or later falls within the public domain through no fault of the party receiving the Confidential Information; or

(II) is, or becomes, available to the receiving party from third parties, who, in making such disclosure, have breached no written confidentiality agreement; or

(III) is previously known by the receiving party;

(IV) is independently developed by or for the receiving party without use of the Confidential Information.

(d) In the event any party receives a request to disclose any Confidential Information under the terms of a valid and effective subpoena or order issued by a court of competent jurisdiction or a governmental body, such party shall (I) immediately notify the party that furnished such Confidential Information of the existence, terms and circumstances surrounding such request, (II) consult with such party on the advisability of taking legally available steps to resist or narrow such request, and (III) exercise reasonable best efforts, at the expense of the party producing such Confidential Information, to obtain an order or other reliable assurance that confidential treatment will be accorded to such portion of the Confidential Information as may be disclosed.

#### ARTICLE VI. TERM; TERMINATION

6.01 **Term.** This Agreement shall continue indefinitely, unless terminated as provided herein.

6.02 **Termination for Material Breach.** Any party may, at its option, terminate this agreement in the event of a material breach by another party. Such termination may be effected only through a written notice to another party, specifically identifying the breach or breaches on which termination is based. Following receipt of such notice, the party in breach shall have thirty (30) days to cure such breach or breaches and this Agreement shall terminate in the event that such a cure is not made by the end of such period. The claim of material breach justifying termination shall be limited to the specific breached set forth in the above written notice as explained, supported and negated by evidence.

6.03 **Consequences of Termination.** In the event this Agreement is terminated in accordance with article 6.02 hereof, this Agreement shall remain in force with respect to the parties other than the party found in material breach of this Agreement pursuant to article 6.02 hereof. Articles IV, V, VI and VII shall in any event survive termination of this Agreement.

#### Article VII. Miscellaneous

7.01 **Four Corners.** This Agreement collectively sets forth the entire agreement and understanding between the parties hereto with respect to the subject matter hereof and, except as specifically provided herein, supersedes and merges all prior oral and written agreements, discussions and understandings between the parties with respect to the subject matter hereof, and neither of the parties shall be bound by any conditions, inducements or representations other than as expressly provided for herein.

7.02 **Independent Contractors.** In making and performing this Agreement, Amiga and the Amiga One Partners act and shall act at all times as independent contractors and nothing contained in this Agreement shall be

7

*Amiga One Partners*



construed or implied to create an agency, partnership or employer and employee relationship between Amiga and the AmigaOne Partners. At no time shall either party make commitments or incur any charges or expenses for or in the name of the other party.

**7.03 Amendments; Modifications.** No amendment, modification or attempt to supersede or cancel any of the terms, covenants, representations, warranties or conditions hereof shall be effective unless such amendment, modification or direction to supersede or cancel such term, covenant, representation, warranty or condition is executed in writing by Amiga and Hyperion or, in the case of a waiver, by or on behalf of the party waiving compliance. No waiver by any party of any condition, or of any breach of any term, covenant, representation or warranty contained in this Agreement, in any one or more instances, shall be deemed to be a further or continuing waiver of any such condition or breach or a waiver of any other condition or of any breach of any other term, covenant, representation or warranty.

**7.04 Severability.** The provisions of this Agreement shall be severable, and if any of them are held invalid or unenforceable for any reason, such provision shall be adjusted to the minimum extent necessary to cure such invalidity. The invalidity or unenforceability of one or more of the provisions contained in this Agreement shall not affect any other provisions of this Agreement.

**7.05 Waivers.** The waiver of any breach of any provision of this Agreement or failure to enforce any provision hereof shall not operate or be construed as a waiver of any subsequent breach.

**7.06 Governing Law.** This Agreement shall be governed by and interpreted in accordance with the internal laws of Washington State, USA without regard to conflicts of laws principles. The obligations set forth in this Agreement are intended to supplement and not to supersede the protections afforded Amiga under the Uniform Trade Secrets Act or similar law or laws as may be in effect from time to time within the State of Washington.

**7.07 Dispute settlement.** Before filing any suit (with the exception of injunctive relief related to the protection of intellectual property) both parties shall submit to mediation to be completed within 30 days after written notice. In the event of any dispute between the parties that arises out of this Agreement, the substantially prevailing party shall be entitled to reimbursement for its attorneys' and experts' costs, fees and expenses. The provisions of this Agreement shall not be construed as limiting any rights or remedies that either party may otherwise have under applicable law and shall be in addition to all other rights and remedies of such party, including any which may arise out of any other written agreement involving the parties.

**7.08 Forum.** The exclusive jurisdiction and venue of any lawsuit between the parties arising under this Agreement or out of transactions contemplated hereby shall be the Superior Court of Washington for King County or the United States District Court for the Western District of Washington at Seattle and each of the parties hereby submits itself to the exclusive jurisdiction and venue of such court for the purposes of such lawsuit.

**7.09 Counterparts.** This Agreement may be executed in any number of counterparts, each of which when so executed shall be deemed to be an original and all of which when taken together shall constitute one Agreement.

**7.10 Signatures by Facsimile.** Any facsimile signature of any party hereto shall constitute a legal, valid and binding execution hereof by such party.

**7.11 Construction.** This Agreement is the product of joint draftmanship and shall not be construed against one party more strictly than against another.

**7.12 Effect.** The Agreement shall be binding upon and inure to the benefit of each party hereto, and their successors and assigns. Neither party shall assign or subcontract the whole or any part of this Agreement without the other party's prior written consent.

**7.13 Headings.** The headings in this Agreement are inserted merely for the purpose of convenience and shall not affect the meaning or interpretation of this Agreement.

A handwritten signature in black ink, appearing to be "Amiga" followed by a stylized flourish.

IN WITNESS WHEREOF, the parties, by their authorized representatives, have executed this Agreement.

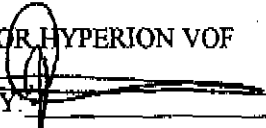
FOR AMIGA INC.

BY: 

NAME (PRINTED) Burke Jan Moss

TITLE CTO Amiga

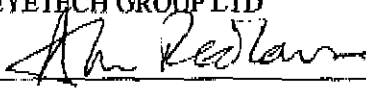
FOR HYPERION VOF

BY: 

NAME (PRINTED) BEN HERMANS

TITLE Managing partner

FOR EYETECH GROUP LTD

BY: 

NAME (PRINTED) Redshaw

TITLE MANAGING DIRECTOR

### OS 4 Schedule and Feature List

*Hans-Jörg Frieden,  
Senior software engineer, Hyperion Entertainment*

This document describes the tasks required to get to OS 4 running on the AmigaOne and CyberStorm PPC hardware. Tasks are categorized as *essential*, *important* or *optional* depending on their importance. *Essential* tasks must be carried out to get bare minimum functionality. *Important* tasks are task that are not essential for functionality, but are to be considered so fundamental that OS 4 would rather be incomplete without them. Finally, *optional* tasks are things that can be considered if time and resources don't run out. They would be nice to have, but not critical.

### Design Goals of OS 4





## OS 4 Schedule and Feature List

Hans-Jörg Frieden,

Senior software engineer, Hyperion Entertainment

This document describes the tasks required to get to OS 4 running on the AmigaOne and CyberStorm PPC hardware. Tasks are categorized as *essential*, *important* or *optional* depending on their importance. *Essential* tasks must be carried out to get bare minimum functionality. *Important* tasks are task that are not essential for functionality, but are to be considered so fundamental that OS 4 would rather be incomplete without them. Finally, *optional* tasks are things that can be considered if time and resources don't run out. They would be nice to have, but not critical.

## Design Goals of OS 4

The following summarizes the desired design goals of OS 4.0:

- Essentially, OS 3.9 running on the AmigaOne and CyberStorm PPC without using the 68k CPU, using a 68k Emulator, possibly the JIT compiler, but may work with a non-JIT for starters. The kernel is a PPC native Exec with Haage & Partner's emulator (or the JIT emulator under development by a third party) running instead of the on-board 68k.
- As much PPC-native as necessary as soon as possible. This in combination with the 68k emulation (as opposed to cache-flushing needed to keep both CPU's memory image in sync) would mean a tremendous boost in performance, also carried by the fact that the memory interface and PCI/AGP bus can achieve a substantially faster throughput as the old Zorro III or PCI-Bridges. Not to mention that the CPU will be a good deal faster.
- New file system replacing the old FFS, preferably PPC-Native if possible. The old file system has turned out to be one of the major bottlenecks. It is outperformed by e.g. Linux ext2 by a factor of 10.
- Virtual Memory System. Most modern games, most modern applications require a tremendous amount of memory. Having virtual memory as part of the system is a key factor for tighter development schedules.
- Runs on the AmigaOne as well as the iclassic hardware. Blizzard version probably undesirable/impossible (performance reasons), but CyberStorm PPC required. Anything else would mean replacing one small market of weak machines with another small market with strong machines. The key factor must be for software developers to widen the market, making Amiga development feasible, and offer an upgrade path for A1200 owners to a top-of-the-line hardware.

## Tasks

Task: [REDACTED]  
Priority: [REDACTED]  
Prerequisite: [REDACTED]  
Required for: [REDACTED]  
Performed by: [REDACTED]  
Estimated time: [REDACTED]

It was decided that the cleanest and technologically most satisfying solution is a PPC port of Exec which handles both the PPC tasks and the emulated 68K tasks.

Porting WarpOS will essentially mean writing a new warphw.library. This should be relatively straightforward, since this was one of the design goals for WarpOS. Once this is done, the emulator must be adapted to run on this. Possibly, there would need to be some adaptations to the G3 processor.

The emulator would either be the 68K emulator by Haage & Partner or the JIT emulator by Almos Rajnai or a combination of both. Whilst JIT emulation is to be preferred because of its higher speed, it is unclear at this point if the JIT emulator will be finished in time to coincide with release of OS 4.0.

Task: [REDACTED]  
Priority: [REDACTED]  
Prerequisite: [REDACTED]  
Required for: [REDACTED]  
Performed by: [REDACTED]  
Estimated time: [REDACTED]

Work on the CyberStorm SCSI drivers is already underway. The basic motivation is that the original cybppc.device does not work on the emulator due to MMU page size restrictions. Furthermore this driver may be later adapted to work with PCI SCSI cards as a lot of existing users have SCSI rather than IDE based hardware.

Task: [REDACTED]  
Priority: [REDACTED]  
Prerequisite: [REDACTED]  
Required for: [REDACTED]  
Performed by: [REDACTED]  
Estimated time: [REDACTED]

Since this task might be very similar to the aforementioned CyberStorm SCSI driver, it might be conceivable to contract Mr. Souvatzis for this task, too. Maybe a solution would be to use a PCI SCSI controller in the AmigaOne with the same chipset as the CyberStorm PPC.

Task: [REDACTED]  
 REX/Predator [REDACTED]  
 Permedia2 [REDACTED]  
 Priority [REDACTED]  
 Prerequisite [REDACTED]  
 Required for [REDACTED]  
 Performed by [REDACTED]  
 Estimated time [REDACTED]

The Picasso96 RTG system must fully support all hardware that is targeted for AmigaOS 4. Therefore the most frequently used card, the CyberVisionPPC, must also be supported. Work on this is already underway, but made more complicated by the fact that the CSPPC's flash rom already sets up some of the Permedia2 for the passthrough option.

With Picasso96 drivers already present for the Prometheus PCI bridge as well as the Mediator solution (albeit still with the issue of non-conformance with the Picasso96 authors' license), the only remaining PCI boards to be supported would be G-REX or the Predator. Support of these boards requires cooperation with DCE/Thomas Dellert.

Supported graphics card for OS4 should at the least cover Permedia2, Voodoo 3 and possible S3 VIRGE (the latter because of its still wide-spread use and cheap PCI versions).

Task: [REDACTED]  
 Priority [REDACTED]  
 Prerequisite [REDACTED]  
 Required for [REDACTED]  
 Performed by [REDACTED]  
 Estimated time [REDACTED]

Changes made after OS 3.1 must be incorporated into the main tree in the CVS repository. If a new kickstart ROM is desired, this would include the kickstart source code as well as all modifications done by the SetPatch program.

There might be license issues involved with this, for example for the Reaction GUI

system. License issues are outside the scope of this document.

Task: *[REDACTED]*  
 Priority: *[REDACTED]*  
 Prerequisite: *[REDACTED]*  
 3/4/5: *[REDACTED]*  
 Required for: *[REDACTED]*  
 Performed by: *[REDACTED]*  
 Estimated time: *[REDACTED]*

All graphics cards supported by OS 4 should have proper 3D graphics support. Note that drivers for the Voodoo 3, Permedia2 and ViRGE graphics chips are already present. This means that essentially only the Matrox cards would need to be handled at this point.

Note that the estimated time for this task does not include changes on the API or naming scheme for Ami3D. However, the author's opinion on this is that for OS 4 the name iWarp3Di and the naming scheme iWarp3D.libraryi and iWarp3DPPC.libraryi should still be employed, and Ami3D should come with OS 4.2, or later as a being bag for OS 4.

Task: *[REDACTED]*  
 Priority: *[REDACTED]*  
 Prerequisite: *[REDACTED]*  
 Required for: *[REDACTED]*  
 Performed by: *[REDACTED]*  
 Estimated time: *[REDACTED]*

OpenGL is the only cross-platform API for handling 3D graphics (in contrast with Direct3D which is a proprietary Microsoft API). The availability of an OpenGL implementation would allow for simplified porting of OpenGL based games and applications to Amiga OS.

The proposed OpenGL implementation would be based on Mesa 4.0, an open source implementation of the OpenGL 1.3 specification (see: <http://mesa3d.sourceforge.net>).

Task: *[REDACTED]*  
 Priority: *[REDACTED]*  
 Prerequisite: *[REDACTED]*  
 Required for: *[REDACTED]*  
 Performed by: *[REDACTED]*  
 Estimated time: *[REDACTED]*



The rewrite of the fast file system should be regarded as a performance issue, and therefore essential. Since the FFS2 is already in beta-test, the only remaining issue (besides bugfixes) is conversion to PPC.

Task: [REDACTED]  
Priority: [REDACTED]  
Prerequisite: [REDACTED]  
Required for: [REDACTED]  
Performed by: [REDACTED]  
Estimated time: [REDACTED]

No operating system is complete without a tcp stack. Possibly old systems like Miami and/or Genesis/AmiTCP may not work anymore.

Like with the FFS2 conversion to PPC is still required.

Task: [REDACTED]  
Priority: [REDACTED]  
Prerequisite: [REDACTED]  
Required for: [REDACTED]  
Performed by: [REDACTED]  
Estimated time: [REDACTED]

According to Haage & Partner, this task is already finished except for PPC conversion, which they said should be a very easy task.

Task: [REDACTED]  
Priority: [REDACTED]  
Prerequisite: [REDACTED]  
Required for: [REDACTED]  
Performed by: [REDACTED]  
Estimated time: [REDACTED]

In order to enable stand-alone usage of the AmigaOne board, a minimal USB stack would be *la cool thing to have*, i.e. It is not required to actually get the project done, but would a) allow the AmigaOne to be used in standalone mode and b) would help those people related to the project that do not have access to an A1200.

It might be possible to recycle some source code from Linux for that, or alternatively from a BSD clone because of the more liberal license (Microsoft do have a point about the GPL's viral properties).

As I said, this is highly optional.

Task: [REDACTED]  
 Priority: [REDACTED]  
 Prerequisite: [REDACTED]  
 Required for: [REDACTED]  
 Performed by: [REDACTED]  
 Estimated time: [REDACTED]

The current Audio systems is either hardware-dependent (`audio.device`, direct DMA sound access) or AHI (and hence slow, 68k only, and with a lot of shortcomings). A new Audio system is absolutely required for at least OS 4.2, preferably earlier. This system should be able to cope with modern sound cards including 3D-Sound, and should be useful for both game programmers as well as multimedia programmers/studio musicians.

*What's wrong with AHI?* The API is divided in a low-level or high-level API. Both are rather awkward to use (for example, the low-level API only offers a callback mechanism that is triggered when a samples buffer *starts* playing, not when it finishes playing or reaches a certain position in the sample stream). Also, essential functionality is missing (for example, find out where the current sample playback position is). It also doesn't support any features of modern soundcards, or features of Amiga-specific sound cards like the Delfina.

More importantly, it is known to be extremely slow. Its mixing routines are slow, so people roll their own. Even with sound cards is is much slower than the audio device (compare Shogo or Wipeout XL with or without AHI sound).

Task: [REDACTED]  
 Priority: [REDACTED]  
 Prerequisite: [REDACTED]  
 Required for: [REDACTED]  
 Performed by: [REDACTED]  
 Estimated time: [REDACTED]

## General Notes

Olaf Barthel will function as the build master (apologies to Olaf because his name is mentioned quite frequently throughout this document).

Work should start as soon as possible on the CyberStorm PPC hardware. To work around the lack of a SCSI driver, the initial work can be carried out with an IDE disk



connected to the A4000's internal IDE port. Admittedly this is not the fastest option, but a workable one.

All parties involved should have read access to the CVS at all time, and also have access to nightly/weekly builds of the OS. A mailing list should be established. From time to time a meeting of all parties involved would be desirable.

## **Future Work**

It is clear that the primary concern should be to get OS 4 up and running on both the AmigaOne as well as the CyberStorm PPC cards as soon as possible. After the basic work is done, further updates and goodies may be made available as being bag upgrades on the road to OS 4.2. Listed below are a few things that come to mind:

**WarpInput.** WarpInput is an API drafted by Hyperion Entertainment (draft available on request. Contact Hans-JoergF@Hyperion-Entertainment.com), the purpose of which is to allow unified access to multimedia controller devices like Joysticks, steering wheels, trackballs and similar devices as well as the mouse and keyboard, from a multimedia or games programmers point of view. Could be renamed iAmiInputf (or some more prosaic name) and reused on AmigaDE and OS 4.2.

**PPC-Native GUI system.** At the moment it is painful to write fast applications with GUI's PPC-native. This is because every call like `intuition.library/GetMsg()` requires a cross-CPU context switch. Porting BOOPSI to PPC and also porting a toolkit like Reaction would help this effort tremendously.

**Gradual changes to PPC code.** More OS code can be moved to PPC as time permits.

## Appendix: Migration to PPC-Native libraries (Proposal)

OS 4.0 could provide a way to implement PPC native libraries and devices incrementally, that is, allow libraries and devices to coexist as the original 68k version as well as a new PPC native version. This document tried to outline the principle.

There is one fixed address in the Amiga system. This is address 0x4, the ExecBase. To open a library (or a device, which is a special form of library) you call the Exec function `OpenLibrary` to obtain a base pointer. Currently there is only one address 0x4.

The principle doesn't change when the 68k emulator is involved – yet. However, this may be changed. An MMU setup will be able to write- and read-protect the first page of the Amiga memory. This way an exception is generated when a read access to the ExecBase pointer is performed. The system may now decide if a PPC task or an emulated 68k task tried to access the ExecBase and return a different pointer, one for the traditional ExecBase, and one for a special PPC version of ExecBase.

We now have a way to have a PPC-native Exec library that can provide the same functionality as the traditional Exec, plus new functions that are unique to the PPC/OS4 version. The new functionality can be implemented this way without interfering with 68k programs.

The new PPC Exec can now provide its own `OpenLibrary` function to open other PPC-native libraries. Theoretically, there could be a PPC-Native version of e.g. `Intuition`, as well as a 68k version. However, this is not needed in all cases, and can be a continuous process.

If a PPC program tries to open a library that is not available as a PPC native library, the runtime system could generate a PPC stub library on the fly, by generating a library base with stubs that automatically hand over control to the appropriate 68k function via the emulator. The same could be done for 68k programs, making it possible to replace system libraries completely.

### Example:

Consider the following:

```

struct Library *ExampleBase;

ExampleBase = (struct Library *)OpenLibrary("example.library"),
0);
if (!ExampleBase) exit(0);

// Call an example library function
int i = ExampleFunc(x,y);

```

What happens is the following: To call the `OpenLibrary` function, the compiler generates an address lookup at `_SysBase`, which is usually internally taken from address 0x00000004 at program startup. To call the function, the appropriate jump address is taken from the `_SysBase` minus the offset of the function. The resulting

address is what the program jumps to. On a PPC this jump mechanism works a bit different from the 68k, but in principle this is the same. The only problem is that a PPC program wants PPC code that it can jump to, while a 68k program expects 68k code at the jump target.

The only solution is to have separate base pointers for libraries on PPC and 68k. For `exec.library` this is done by providing a PPC-native (or almost PPC-native) `exec` with all the functionality as its 68k counterpart. A PPC program reading address four will generate a page fault, and the runtime system will be able to return a different address than that of the 68k base<sup>1</sup>.

As soon as this distinction is made, the rest of the system will fall in place automatically. On 68k, the call to `OpenLibrary` will proceed normally; on PPC, the PPC `exec` might for example look in a different directory (for example, `PPCLIBS:` as opposed to `LIBS:`), or add a prefix/suffix ("`lppcexample.library`" as opposed to `example.library`"), or any other way to keep them apart.

In any case, the result is that a program can be compiled on both PPC and 68k from identical source code. Furthermore, the two `exec`'s can cooperate; for example, signaling, message passing and semaphores can be shared between them (remember that we can re-compile `exec` and also make modifications to the 68k version). In the above example, the `ExampleBase` pointer returned is a PPC library on the PPC side, and a 68k library on the 68k side. Furthermore, this system works dynamically, as will be outlined below.

### **Migration**

In order to allow incremental development of OS 4 into as much PPC native code as possible, the PPC version of the `OpenLibrary` call can actually verify if there is a PPC version of the library in question and selectively choose to *fail* if this is not the case, or instead construct a new library on-the-fly from the 68k counterpart. The PPC `exec` would look up the library on the 68k side, and if found, construct a new base and substitute all entries by simulated context switches into the 68k side, using the 68k emulator. If the need should arise, a scheme could be applied in which a PPC library need only implement parts of its own functionality, and make automatic context switches/emulator jumps into its 68k counterpart. This way for example a PPC version of `Intuition.library` could still use the 68k version of `OpenScreen`, but have its own PPC implementation of the more frequent calls like `OpenWindow` or similar. On a related topic, this scheme could be applied to time-critical functions in other system library, for example the drawing functions in `graphics.library`.

---

<sup>1</sup>The alternative would be to initialize `SysBase` at the start of the program to a different value than that stored in `0x00000004`, but this would need modifications to the startup code, and would not be binary compatible; the program in question would need to be re-linked.

**EXHIBIT B**

# ReedSmith

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599 Lexington Avenue  
New York, NY 10022-7650  
212.521.5400  
Fax 212.521.5450

November 21, 2006

Ben Hermans, Esq.  
Sebastien Verva, Esq.  
Monard d'Hulst  
Tervurenlaan, 270  
Brussels, Belgium 1150

Re: Hyperion/Amiga OS 4

Dear Messrs. Hermans and Verva:

Thank you for your recent letter on behalf of Hyperion VOF ("Hyperion").

Our client shares your client's desire for a mutually satisfactory resolution of this matter. However, we do not believe that your recent correspondence advances that effort. Rather, it demonstrates Hyperion's intent to remain in breach of the Agreement and to raise irrelevant and meritless "claims" having nothing to do with performance of the Agreement.

First, the issue of payment under Section 3.01 (the "buy out" clause) of the November 3, 2001 Agreement must be resolved. Our position, that payment was completed in 2003, has already been stated. However, in order to resolve this issue beyond dispute, Amiga is remitting to Hyperion the balance of \$8,850 stated in your October 10, 2006 letter by wire transfer simultaneously with this letter. Amiga therefore formally demands that Hyperion cease its continuing breach and immediately turn over to Amiga the Source Code, Object Code and intellectual property of OS 4.0, along with an assignment of all title and interest. Please send these items to the undersigned by overnight courier.

Second, your letters have provided no meaningful response to Amiga's statement that Hyperion has committed and continues to commit several material breaches of the November 3, 2001 Agreement. Specifically, in our first letter, we noted Hyperion's failure to use best efforts to ensure that Amiga OS 4.0 was ready for release before March 1, 2002; failure to release Amiga OS 4.0; failure to turn over the Source Code, object code, intellectual property rights, interest and title in OS 4.0 pursuant to the 2003 Agreement; and marketing OS 4.0 beyond the market for the Target Hardware.

Therefore, pursuant to Section 6.02 of the November 3, 2001 Agreement, Amiga provides formal written notice to Hyperion that Amiga is terminating the November 3, 2001 Agreement due to Hyperion's material breaches of the Agreement. Pursuant to Section 6.02, Hyperion has thirty days from the receipt of this notice to cure such breaches. In the event that each and every one of Hyperion's breaches are not cured by **December 21, 2006**, the Agreement will be terminated as of that date. The specific material breaches are:

NEW YORK • LONDON • LOS ANGELES • PARIS • SAN FRANCISCO • WASHINGTON, D.C. • PHILADELPHIA • PITTSBURGH • OAKLAND  
MUNICH • PRINCETON • NORTHERN VIRGINIA • WILMINGTON • NEWARK • MIDLANDS, U.K. • CENTURY CITY • RICHMOND

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Ben Hermans, Esq.  
Sebastien Verva, Esq.  
November 21, 2006  
Page 2

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- a. Failure to use best efforts to ensure that Amiga OS 4.0 was ready for release before March 1, 2002. It is now November 2006 and Amiga OS 4.0 has still not been released. In this case, *res ipsa loquitur*: the thing speaks for itself. There is simply no way that the exercise of best efforts would result in a delay of over four and a half years. This requires no further evidence or support. Given the passage of time, this breach is incurable.
- b. Failure to release Amiga OS 4.0. As above.
- c. Failure to turn over the Source Code, object code, intellectual property rights, interest and title in OS 4.0 pursuant to the 2003 Agreement. This also requires no further evidence or support. Amiga has paid the necessary "buy out" amount. The material breach can be cured by tendering the Source Code, Object Code and intellectual property of OS 4.0, along with an assignment of all title and interest, to Amiga as demanded above, as well as complete information regarding any claims that third parties (*e.g.*, developers and consultants) may have.
- d. Marketing OS 4.0 beyond the market for the Target Hardware. Pages from Hyperion's website at [www.amigaOS4.com](http://www.amigaOS4.com) are attached hereto. Over and over, these pages sell the Amiga OS 4.0 for everything from kiosks, STBs and cellphones to servers and un-named OEM devices. Hyperion's distribution right is limited to a "license to market and distribute OS 4.0 as a standalone version for the Target Hardware and as an OEM version shipped with the Amiga One." Hyperion's marketing efforts, as evidenced by its website, go far beyond this license. In order to cure this material breach, Hyperion must remove all statements and indications from the website that the software is available for any use other than the Target Hardware. Hyperion must also cease any and all other activities that make these same claims, and provide complete information regarding sales contacts arising from these prohibited marketing efforts.
- e. Failure to use best efforts to secure the widest possible right to all Source and Object Code to OS 4.0, by using third parties without reasonable safeguards to ensure that all rights can be transferred to Amiga. Hyperion has engaged numerous independent contractors to develop OS 4.0, and has failed in certain instances to be forthcoming about their employment status. It also appears that Hyperion may have pledged the Source Code and Object Code to OS 4.0 as collateral. As a result, it appears that Hyperion has significantly impaired the ownership and access rights to portions of the Source and Object Code to OS 4.0. This cure for this material breach is the acquisition of all ownership and access rights to the Source and Object Code from third parties, and the release of all claims by third parties to such Source and Object Code.

Hyperion must provide Amiga with formal written notice and documentary proof that each of the above material breaches has been cured to Amiga's satisfaction, or else the Agreement will be terminated on **December 21, 2006**. After such termination, Hyperion will have no right to market or distribute any version of Amiga OS 4 into any market. Furthermore, any attempt to distribute any version of Amiga OS 4 under any other name or mark will be viewed as an infringement of Amiga's intellectual property rights and will be dealt with accordingly.

Pursuant to Section 7.07 of the Agreement, Amiga hereby provides Hyperion with formal written notice of its demand for mediation with regard to each of the above breaches, to be completed by **December**



Ben Hermans, Esq.  
Sebastien Verva, Esq.  
November 21, 2006  
Page 3

ReedSmith

21, 2006. In order to accommodate the parties, Amiga is willing to conduct this mediation in New York, New York, at the offices of Reed Smith or a mutually agreeable location, rather than in Seattle, Washington. Please contact the undersigned immediately to discuss the selection of a mediator for the mediation proceedings and to schedule the mediation sessions.

We look forward to hearing from you shortly.

Sincerely,



Gregory S. Shatan

cc: Mr. William McEwen  
Mark G. Pedretti  
Scott Baker



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## Welcome to AmigaOS4.0



Welcome to the official website of AmigaOS4.0. Here you will find information and resources relating to the latest release of the Operating System that introduced the world to multimedia and proves the fact that so much of the computing industry has forgotten - that computers can be fun.

20 years after the Amiga Operating System was first unveiled to the public it is returning, better than ever, thanks to a joint effort by Amiga Inc. and Hyperion Entertainment VOF. This new version of the famous OS takes all the features that made the original AmigaOS great, and updates them with the latest requirements for cross-platform 21st Century computing devices of all sorts. From desktop computers to mobile hardware, AmigaOS4.0 delivers a uniquely accessible, powerful, and above all fun way to use technology.

Whether you are one of the thousands of dedicated enthusiasts for the platform or an ex-user curious to see what's going on, if you are completely new to the Amiga experience or a potential OEM client considering the deployment of AmigaOS 4.0 on your own hardware, we hope you'll find plenty in this website to interest you.



# AMIGA OS 4.0

## AmigaOS4.0 Memory Allocation

Back in the old days of the original AmigaOS, the system used to allocate areas of unused memory to new tasks was pretty simple. The size and position of blocks of free memory were kept in a list, and when memory was needed the system

## AmigaOS 4.0 new memory system revisited

In a previous item, we described how the AmigaOS4.0 memory system works in terms of managing memory allocations from the top.

would traverse this list until it found a block that was sufficiently large. This block was then split, one part returned by the allocator for use, while the other part (whatever part of the block wasn't needed) was left in the free list. This method served its purpose well enough at the time, but with the increased demands of modern computing - and of course our desire to bring this new version of the Operating System to the cutting edge - AmigaOS4.0 has introduced a better way of doing things.

[Read more...](#)

**More...**

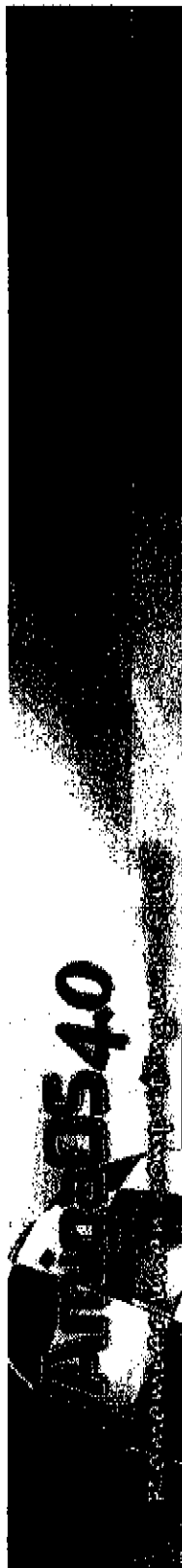
[AmigaOS4.0 website launched](#)

[Feature Spotlight: The RAM Disk](#)

However, there is more to allocating memory than that. The object caches of course work on memory that has already been mapped into the virtual memory space. But both the virtual address ranges, as well as the physical memory has to come from some source, too.

[Read more...](#)

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### The AmigaOS advantage - your advantage.

If you are looking for an Operating System solution, AmigaOS4.0 could be the perfect answer to your needs. Compact, efficient, and proven over 20 years of use, AmigaOS is a unique and compelling advantage for OEM solutions.

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### 4.0 for Amiga Users

Are you an Amiga enthusiast? One of the dedicated users who has stuck through thick and thin with the Amiga because you know just how good a computer can be? If so you've been waiting a long time for a major upgrade to the Amiga Operating System, and with AmigaOS4.0 it's finally here. Welcome to the biggest upgrade in the history of the OS.

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### Nostalgic for the Amiga?

Remember when computing was fun? Remember the Amiga?

Are you an ex-Amiga user? Perhaps you owned one, or used one at work or school? You've heard there's a new version and want to know all about it? Then read on...

[Read more...](#)

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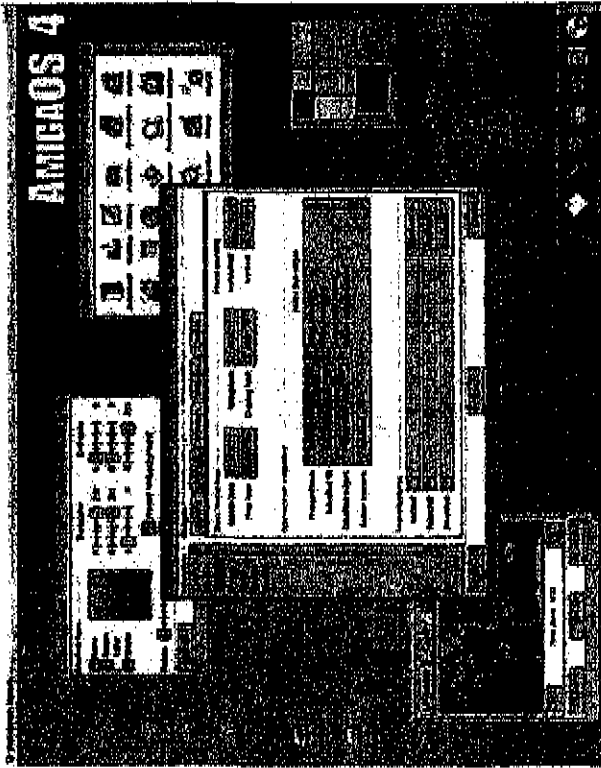
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AmigaOS4.0 Workbench

Evaluating Operating Systems for OEM production has always been a

### AmigaOS4.0 your advantage



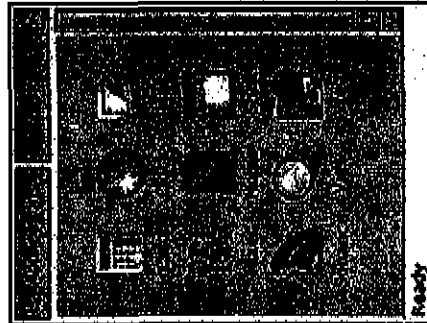
Small footprint, low cost-to-market:

AmigaOS4.0 can provide fast, responsive multimedia displays even on low-end hardware such as kiosks or STBs. It has display and GUI capability that can scale down from high-definition screens to small LCD displays. Its compactness and efficiency offer high performance with low CPU and memory specification and can run on hardware, and can run on small solid-state devices with no hard drive or other moving parts for greater hardware reliability and lower unit failure rates.

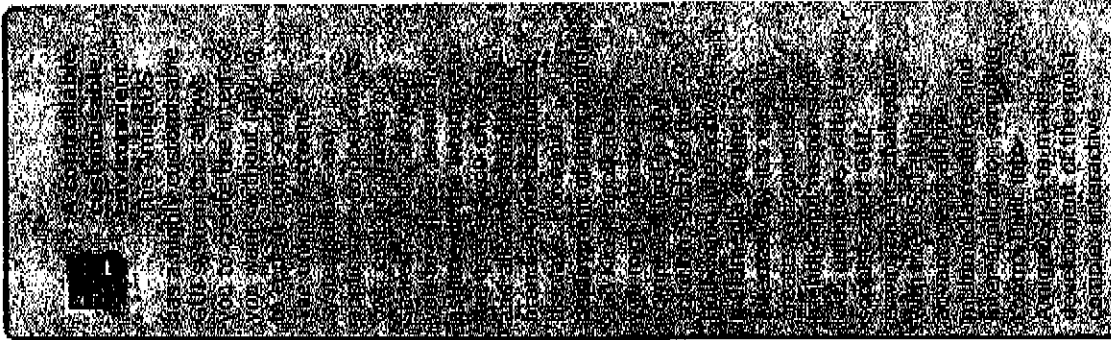
matter of balancing compromises. In an imperfect world, nothing ever seems quite perfect for your requirements unless you make it yourself, and few companies have the resources to develop an entirely custom Operating System for anything other than the most basic of devices. Instead you are forced to choose between offerings on the market that have targeted uses other than your own, and inevitably they will not entirely match your requirements. Operating Systems with a desktop legacy will be unwieldy, bloated with functions that are unnecessary for embedded applications, whilst embedded OS designs inevitably have less flexibility and a smaller feature set, and therefore require more work to suit your purpose.

History has benefited the AmigaOS with a unique middle-ground position that gives it extraordinary scalability and grants it many of the advantages traditionally associated with embedded Operating Systems as well the flexibility and feature-rich environment of a desktop OS. If you're in the process of evaluating the potential of Operating Systems for an OEM development, then read on and discover why AmigaOS4.0 could present the perfect opportunity for you.

When the first version of AmigaOS was developed twenty years ago, it was a unique union of design philosophies that bridged a divide that was barely recognised at the time. There were two driving forces in the creation of the AmigaOS - the desire to create an Operating System suitable for a games machine, which we would today consider an embedded application, and the desire to create a world-beating desktop Operating System, taking inspiration from the \*nix world to include sophisticated architectural features years ahead of its desktop competition. It was written for a computer running a 7MHz, 16-bit processor and 256kB of RAM, yet provided a graphical interface that was sophisticated enough to provide a rich multimedia experience without compromising responsiveness and user comfort. Although the AmigaOS has come a long way since then, that legacy remains;



AmigaOS 4.0 PDA display





AmigaOS4.0 is a fully-featured desktop Operating System with an extremely small footprint, capable of running on low-end hardware but providing high-end performance.



AmigaOS4.0 scales comfortably from hand-held devices using the 4xx series of PowerPC processors to high-end 64-bit servers. A complete install of the Operating System and a full desktop-ready application suite will sit comfortably in 256MB, while a cut-down but fully functional version requires a mere 16MB. Another benefit of that historical legacy, the GUI and display drivers have been written to be equally

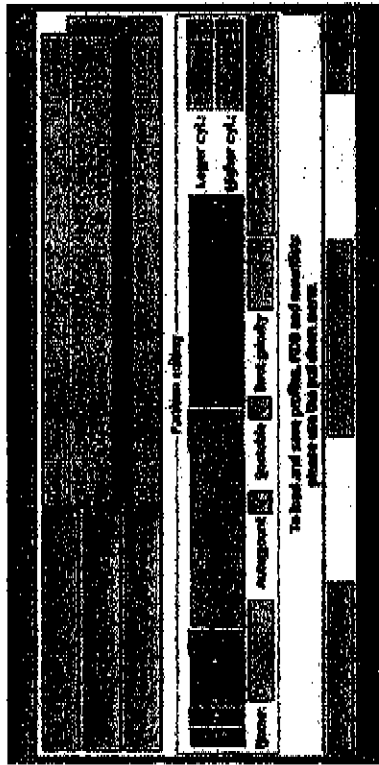
scalable, suitable for low-colour quarter VGA screens up to the highest resolution true-colour high definition outputs. The AmigaOS display was originally aimed at video, and this remains a great strength of the system. Whatever your platform requirements, from high-end smartphone to server system, AmigaOS has the capability to provide for your OS needs.

Of course the mere fact that an Operating System will fit on whatever device you have in mind is really just the start. Consider the further implications of this scalability and you'll soon see why AmigaOS4.0 provides you with a unique advantage. One of the problems with small footprint embedded Operating Systems is that while they bring considerable per-unit cost advantages over larger scale Operating Systems, they have a relatively high pre-market cost. Closed systems mean higher development costs: investment in training and expensive tool sets, a limited range of pre-existing applications and functions, costly development systems and so on. With AmigaOS4.0 you can benefit from the same advantages of a small footprint design without losing the advantages of an open and fully featured desktop, one even capable of self-hosted development. Developing custom applications and user environments is remarkably easy with AmigaOS4.0 because of the wealth of included functionality - enough, after all, to provide a full desktop environment if necessary - and there are literally thousands of shareware, freeware and commercial applications and tools available to utilise, integrate and make your job easier and your costs lower.

multimedia-based systems or low-end hardware but providing high-end performance.

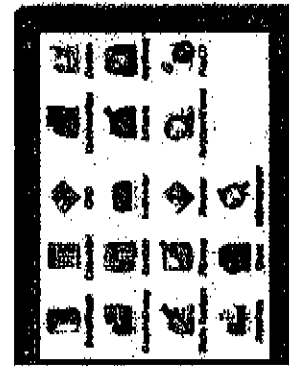
**Simple**  
Development, control, System-wide scripting makes it incredibly simple to modify or use what capabilities and applications are available. For high-end servers, applications will benefit from the 64-bit architecture. Familiar to you, your high-end applications, state-of-the-art bugs, and a variety of programming languages can be used to create high-end applications. Advanced than handling and releasing training materials, you can create your applications, have them on an advanced interface for full support of private libraries, help, metadata, logging and redundancy.





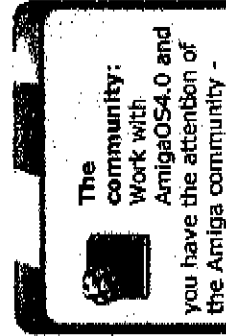
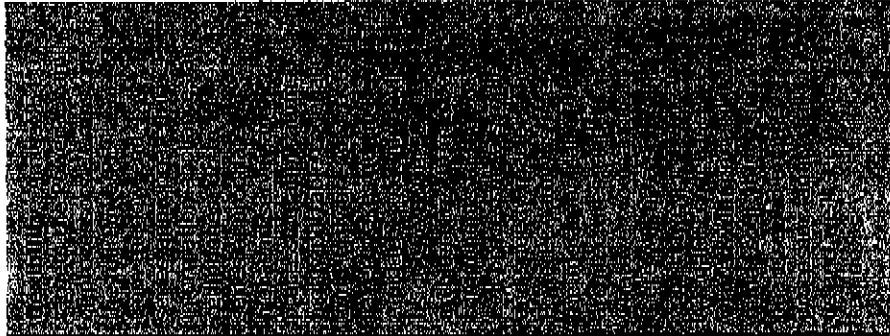
Media Toolbox

AmigaOS4.0 continues the long Amiga tradition of programmer accessibility that inspired thousands of programmers to learn their trade over the last couple of decades, and so there are many programmers already in the market with experience developing for the Amiga platform. Indeed so many developers cut their teeth on their Amigas at home that there's a fair chance you have an experienced AmigaOS developer or two on your team already. In addition a set of libraries and OS level functions in development are bringing AmigaOS4.0 closer than ever to full POSIX compliance for easier porting and cross-development of applications to and from the \*nix world.



Workbench Tools

Thanks to the far-sighted innovations of the original AmigaOS architects, the Amiga platform has found its way into many of the traditional strongholds of embedded computing over the last couple of decades. Features of the Operating System such as a system-wide macro scripting interface accessible by any application, the ability to dynamically open unlimited custom screens, robustness and ultra-fast cycling for minimal downtimes, effectively real-time responses without the overheads often associated with "hard" real-time architecture,



low-cost message passing and a highly configurable and responsive user interface have made it very attractive in a wide range of deployments. AmigaOS has been used for control applications in theme parks, stage shows, CAD/CAM and robotics. It has provided networked real-time telemetry and information displays for Space Shuttle missions, railway stations, airports, leisure centres and naval weather mapping. It has been used in simulators, Virtual Reality, arcade game and gambling machines, provided interactive kiosks, jukebox and EPOS applications in hotels, museums and shopping malls.

If you are evaluating Operating Systems for an OEM product, the chances are high that AmigaOS4.0 can offer a unique advantage to your product, too. Take a look around this site to learn a little more about those unique advantages, and e-mail us to express your interest. We will be happy to discuss your requirements and give you more information about the opportunities for your company and your product to benefit from the AmigaOS advantage.

enthusiastic individuals self-motivated to provide an expert focus group and a pool of talent that can be drawn from. Don't just take our word for it though. Senior research manager Rudy Ruggles at the highly influential Cap Gemini Ernst & Young Center for Business Innovation noted: "While such supported communities are well-studied, there is another variation on these social networks that is even more powerful: self-organizing communities. An illustrative case of this is the community that formed around the Amiga computer... The key is to listen to these communities for what makes them so passionate about this innovation and watch what they are doing to enhance its value. These ideas can be invaluable input to the next generation of that same product.... What can television, PDA, or car makers learn from the enthusiasm of the Amiga community?"

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AmigaOS4.0



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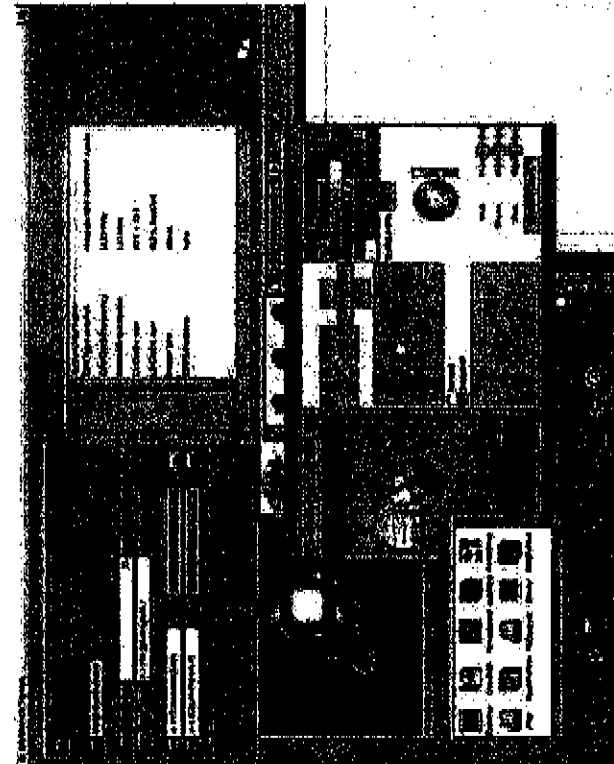
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Remember when computing was fun? Sure you do!

What's new in AmigaOS4.0?

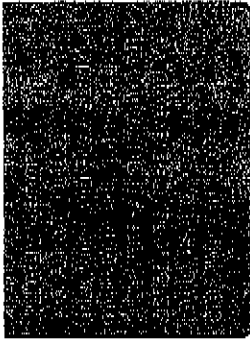
**Updated interface:** Anti-aliased screen fonts, highly configurable Reaction GUI, pop-up menus, AmiDock dynamic toolbar etc.



AmigaOS4.0 Workbench

If you've found your way here, you're probably an enthusiast of the AmigaOS already. You're one of those people who has been watching and waiting through the lean years as well as the good times. You no doubt own at least one Amiga computer, and quite probably more than one. You're an enthusiast, a user, a person who really understands why AmigaOS is something special. You know something that most people in this world don't - that there's an Operating System out there that works the way computers really should.

As an Amiga enthusiast, you probably know the significance of the 23rd of July 1985. It's the date the Amiga was launched. You can read a little more about that in the "20 years ago" page if you need reminding - you'll find it under the "Amiga@20" link to the left. The Amiga is indeed 20 years old now - how time flies. Those years have not always been easy for the Amiga, and probably not always easy for you as an Amiga user, either. In all likelihood you've had to struggle to keep that enthusiasm from time to time. We've all watched as other platforms took advantage of more modern hardware while the Amiga



**Internet access:** Web browsing, e-mail, news, IRC, AIM/ICQ/MSN compatible messaging, ftp, firewall, NAT, set-up wizards for LAN, modem or Router/ADSL connections.

**New apps and viewers:** PDF viewer, CD player, UnARC graphical archiver, video player with support for QT, MPEG-4, DivX and more, a suite of Internet applications, advanced Hard Drive tools, improved text editors, improved shell, new datatypes, development tools and many more.



fell further behind due to lack of development.

**"...the biggest upgrade to the Amiga ever..."**

You probably also know about AmigaOS4.0 already. It has been four years since Amiga Inc. signed the agreement with Hyperion

Entertainment VOF to redevelop and extend the Amiga Operating System, and we don't imagine the wait has been all that easy. We think you'll find that wait was worth it though. AmigaOS4.0 is the biggest upgrade to the Amiga ever - not just bringing it to current hardware and modern standards, but rewriting much of the code from scratch to update, improve and perfect your favourite OS.



As an Amiga User, you know what thinking different really means, and you know what it's like to have a computer that actually does let you go where you want to, when you want to. You remember when computing was fun. You know that the computer industry took something of a wrong turn a decade ago, that it failed to learn the lessons of the Amiga. Modern computing just isn't as friendly, convenient and flexible as it should be - as we know it can be. Your enthusiasm for the Amiga remained because you know that it's a system that gives you control, that works the way you want it to, that is responsive, flexible, creative, and fun. You may now have another computer sitting on your desk next to your Amiga, but that's because there have been new things you needed access to, new developments that the older Amigas couldn't provide for. Unfortunately a part of that package is a computing experience that is a chore instead of an adventure, often filled with frustration - and all the more frustrating because you know perfectly well that there is a better way, one that was left standing when the rest of the computer industry took a wrong turn.

Guess what?

All that changes now.

We're back. We're having fun again, and we want you to be a part of that.

We know how important the Amiga legacy is to you, and we recognise our responsibilities to you and to that legacy.

It hasn't been an easy road for any of us.

There have been disagreements and recriminations, disappointments and delays. Now the Amiga has hit 20 and grown up, we hope we can put those adolescent growing pains of the

Troublesome Teens in the past. Over the last few years the AmigaOS4.0 team has worked tirelessly to produce a new version of your favourite Operating

System, and we hope that you'll consider it a more than worthy continuation of the

Amiga way that has always been as important to you as it is to us.

You, the enthusiasts, have after all been the main driving force for all our efforts. You're like members of the team, and we recognise that

must have been frustrating at times not to have a voice in that team. But you're here to enjoy the fruits of that labour, and to enjoy with us the rebirth of fun computing.

So please, join us for a slice of cake and a round of drinks to toast in the 20th birthday of a computer to be passionate about, because we really appreciate your presence. Here's to you!



# AMIGA OS 4.0

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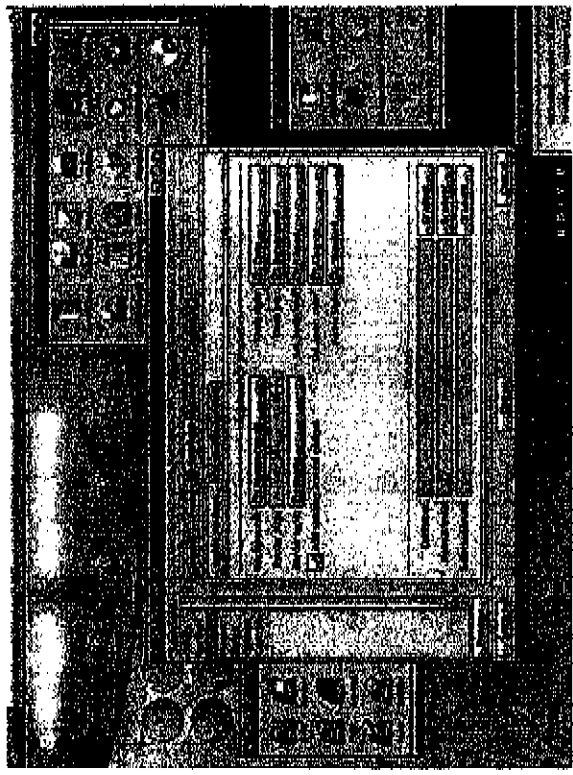


Menu  
[Home](#)  
[AmigaOS](#)  
[Amiga@20](#)  
[About/e-mail](#)

## Nostalgic for the Amiga?

Remember when computing was fun? Remember the Amiga?

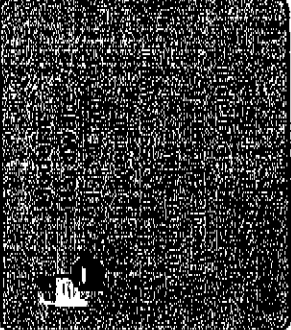
Are you an ex-Amiga user? Perhaps you owned one, or used one at work or school? You've heard there's a new version and want to know all about it? Then read on...




*AmigaOS4.0 Workbench with an alternative GUI theme*

So you remember the Amiga of old. Like millions of other people, you probably used to own one, but "upgraded" to another platform around

What's new in  
AmigaOS4.0?



**Updated interface:** Anti-aliased screen fonts, highly configurable REAction GUI, pop-up menus, AmiDock dynamic toolbar etc.

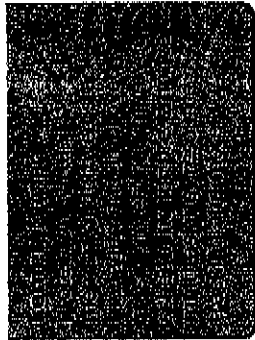


the time Commodore went under, driven by the need to keep up with modern hardware capabilities when that wonderful Amiga Operating System was stuck running on out-of-date machines. We understand, we really do. We also imagine that you remember your time with an Amiga fondly, like pretty much everyone else who used to own one. Again, like millions of other former Amiga owners, you no doubt spent quite a bit of time with your wonderful new platform regretting all the things it just didn't do as elegantly as your old Amiga did. We understand that, too.

You may have had files your computer couldn't read - not because it was incapable of doing so, but because it was just too dumb to figure out what sort of file it was. Your Amiga would never do that. You've probably cursed the plague of viruses and spyware that dog other systems. You've likely cursed over-complex software and hardware installation routines, rebooted your computer for no good reason a thousand times, sat watching interminable lock-ups while your computer was too busy to talk to you, and berated your machine as it took forever to turn on or off. You might look back from time to time to those Amiga days when using your computer was actually fun, a fascinating adventure not a chore. Perhaps you remember what it was like to have a computer that did what you wanted, not a computer that tries to make you do what it wants. You might remember the sheer power that your Amiga gave to you, the creative potential to make it work in a way that suited you, to expand your possibilities and offer boundless potential. We certainly understand that.

Over the years it's quite likely that your initial regret has faded. You've probably got used to the way your "upgrade" works - or doesn't work. You might well have come to terms with that loss of elegance, have dismissed the fact that computing is simply no longer as much fun as the inevitable price of progress. You had to move on - no sense regretting the things you miss from the past, just live with the frustrations inherent in today's computing experience. Now that's where we differ.

We remember when computing was fun. We remember when



**Internet access:** Web browsing, e-mail, news, IRC, ADM/ICQ/MSN compatible messaging, ftp, firewall, NAT, set-up wizards for LAN, modem or Router/ADSL connections.

**New apps and viewers:** PDF viewer, CD player, UnARC graphical archiver, video player with support for QT, MPEG-4, DivX and more, a suite of internet applications, advanced Hard Drive tools, improved text editors, improved shell, new datatypes, development tools and many more.



*The classics - still fun!*

**EXHIBIT C**

**Int. Cl.: 9**

**Prior U.S. Cls.: 26 and 38**

**United States Patent and Trademark Office** **Reg. No. 1,401,045**  
**Registered July 15, 1986**

**TRADEMARK  
PRINCIPAL REGISTER**

**AMIGA**

COMMODORE-AMIGA, INC. (CALIFORNIA  
CORPORATION)  
983 UNIVERSITY AVENUE  
LOS GATOS, CA 95030

COMPUTER MONITORS, AND COMPUTER  
MODEMS, IN CLASS 9 (U.S. CLS. 26 AND 38).  
FIRST USE 7-23-1985; IN COMMERCE  
8-6-1985.

FOR: COMPUTERS, COMPUTER DISK  
DRIVES, RAM EXPANSION CARTRIDGES,

SER. NO. 571,532, FILED 12-4-1985.

G. T. GLYNN, EXAMINING ATTORNEY

**EXHIBIT D**



**Int. Cl.: 9**

**Prior U.S. Cls.: 21, 23, 26, 36, and 38**

**Reg. No. 2,369,059**

**United States Patent and Trademark Office**

**Registered July 18, 2000**

**TRADEMARK  
PRINCIPAL REGISTER**



AMIGA DEVELOPMENT LLC (DELAWARE LIMITED LIABILITY COMPANY)  
600 NORTH DERBY LANE  
NORTH SIOUX CITY, SD 57049

FOR: COMPUTERS, COMPUTER PERIPHERALS, AND COMPUTER OPERATING SYSTEMS, IN CLASS 9 (U.S. CLS. 21, 23, 26, 36 AND 38).

FIRST USE 9-0-1997; IN COMMERCE 9-0-1997. STIPPLING IN THE DRAWING IS A FEATURE OF THE MARK AND IS NOT INTENDED TO INDICATE COLOR.

SN 75-343,350, FILED 8-19-1997.

BARBARA BROWN, EXAMINING ATTORNEY

**EXHIBIT E**

**Int. Cl.: 9**

**Prior U.S. Cls.: 21, 23, 26, 36, and 38**

**Reg. No. 2,802,748**

**United States Patent and Trademark Office**

**Registered Jan. 6, 2004**

**TRADEMARK  
PRINCIPAL REGISTER**

**AMIGA**

AMIGA, INC. (WASHINGTON CORPORATION)  
34935 SE DOUGLAS STREET, SUITE 210  
SNOQUALMIE, WA 98065

DEVICES, IN CLASS 9 (U.S. CLS. 21, 23, 26, 36 AND 38).

FIRST USE 12-27-1999; IN COMMERCE 12-27-1999.

FOR: COMPUTER SOFTWARE USED TO FACILITATE DEVELOPMENT OF SOFTWARE APPLICATIONS THAT CAN RUN ON MULTIPLE PLATFORMS AND OTHER ELECTRONIC DEVICES; OPERATING SYSTEM SOFTWARE FOR PERSONAL COMPUTERS AND OTHER ELECTRONIC

OWNER OF U.S. REG. NOS. 2,319,266 AND 2,369,059.

SN 76-096,557, FILED 7-11-2000.

MICHAEL ENGEL, EXAMINING ATTORNEY

**EXHIBIT F**

TMX Form 1129 (Rev. 04/06)  
 (USPTO Form 1129) (Supplemental)

## Trademark/Service Mark Application, Principal Register

Serial Number: 78940426

Filing Date: 07/28/2006

The table below presents the data as entered.

MARK SECTION	
MARK FILE NAME	\\TICRS\EXPORT4\IMAGEOUT4 \789\404\78940426.xml\AP P0002.JPG
STANDARD CHARACTERS	NO
USPTO-GENERATED IMAGE	NO
LITERAL ELEMENT	AMIGA
COLOR MARK	NO
DESCRIPTION OF THE MARK (and Color Location, if applicable)	The mark consists of the stylized word AMIGA.
PIXEL COUNT ACCEPTABLE	NO
PIXEL COUNT	538 x 188
OWNER SECTION	
NAME	Amiga, Inc.
INTERNAL ADDRESS	Suite 301
STREET	167 Madison Avenue
CITY	New York
STATE	New York
ZIP/POSTAL CODE	10016
COUNTRY	United States
EMAIL	dcohen@reedsmith.com
AUTHORIZED EMAIL COMMUNICATION	Yes
LEGAL ENTITY SECTION	
TYPE	CORPORATION
STATE/COUNTRY OF INCORPORATION	Delaware
GOODS AND/OR SERVICES SECTION	
INTERNATIONAL CLASS	009
DESCRIPTION	Computer software used to facilitate development of software applications that can run on multiple platforms and other electronic devices; operating system software for personal computers and other electronic devices; electronic magazines in field of computers and computer technology; computers, computer peripherals, including telecommunications and

	computer communications equipment, and computer operating systems; computer disk drives; RAM expansion cartridges and external memory devices; application and operating software and systems and developer support kits for use in wired and wireless devices for a wide range of audio-visual and multimedia technologies, including cellular and mobile telecommunications, smart phones, PDAs, web-based servers, television entertainment, entertainment, games and gaming consoles, personal computing, word processing, Internet applications including web browsing, calculators and related devices and technologies
FILING BASIS	Section 1(b)
<b>GOODS AND/OR SERVICES SECTION</b>	
INTERNATIONAL CLASS	016
DESCRIPTION	Magazines in the field of computers and computer technology
FILING BASIS	Section 1(b)
<b>GOODS AND/OR SERVICES SECTION</b>	
INTERNATIONAL CLASS	035
DESCRIPTION	On-line sale of application and operating software and systems for use in wired and wireless devices for a wide range of audio-visual and multimedia technologies
FILING BASIS	Section 1(b)
<b>GOODS AND/OR SERVICES SECTION</b>	
INTERNATIONAL CLASS	038
DESCRIPTION	Hosting and operating user groups and forums in the field of computers and computer technology
FILING BASIS	Section 1(b)
<b>GOODS AND/OR SERVICES SECTION</b>	
INTERNATIONAL CLASS	042
DESCRIPTION	Software developer support and consulting services
FILING BASIS	Section 1(b)
<b>SIGNATURE SECTION</b>	
SIGNATURE	/Bill McEwen/
SIGNATORY NAME	Bill McEwen
SIGNATORY DATE	07/28/2006
SIGNATORY POSITION	Managing Director
<b>PAYMENT SECTION</b>	
NUMBER OF CLASSES	5
NUMBER OF CLASSES PAID	5
SUBTOTAL AMOUNT	1625
TOTAL AMOUNT	1625
PAYMENT METHOD	CC
<b>ATTORNEY</b>	

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STATE	New York
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FAX	(212) 521-5450
EMAIL	dcohen@reedsmith.com
AUTHORIZED EMAIL COMMUNICATION	Yes
ATTORNEY DOCKET NUMBER	503370/20003
OTHER APPOINTED ATTORNEY(S)	Gregory S. Shatan, Susan M. Rosenfeld, Meredith D. Pikser
<b>CORRESPONDENCE SECTION</b>	
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PHONE	(212) 549-0346
FAX	(212) 521-5450
EMAIL	dcohen@reedsmith.com
AUTHORIZED EMAIL COMMUNICATION	Yes
<b>FILING INFORMATION</b>	
SUBMIT DATE	Fri Jul 28 19:25:04 EDT 2006
TEAS STAMP	USPTO/BAS-66108194191-200 60728192504167977-7894042 6-20052bc143e96db66dd4feb 2208d534f3f-CC-683-200607 28192314426291

U.S. Patent & Trademark Office

12/01/06, 10:00 AM, 10/26/07, 10/26/07, 10/26/07

**Trademark/Service Mark Application, Principal Register**

Serial Number: 78940426



Filing Date: 07/28/2006

**To the Commissioner for Trademarks:**

**MARK:** AMIGA (stylized and/or with design, see mark)

The literal element of the mark consists of AMIGA.

The mark consists of the stylized word AMIGA.

The applicant, Amiga, Inc., a corporation of Delaware, residing at Suite 301, 167 Madison Avenue, New York, New York, United States, 10016, requests registration of the trademark/service mark identified above in the United States Patent and Trademark Office on the Principal Register established by the Act of July 5, 1946 (15 U.S.C. Section 1051 et seq.), as amended.

Intent to Use: The applicant has a bona fide intention to use or use through the applicant's related company or licensee the mark in commerce on or in connection with the identified goods and/or services. (15 U.S.C. Section 1051(b)).

International Class 009: Computer software used to facilitate development of software applications that can run on multiple platforms and other electronic devices; operating system software for personal computers and other electronic devices; electronic magazines in field of computers and computer technology; computers, computer peripherals, including telecommunications and computer communications equipment, and computer operating systems; computer disk drives; RAM expansion cartridges and external memory devices; application and operating software and systems and developer support kits for use in wired and wireless devices for a wide range of audio-visual and multimedia technologies, including cellular and mobile telecommunications, smart phones, PDAs, web-based servers, television entertainment, entertainment, games and gaming consoles, personal computing, word processing, Internet applications including web browsing, calculators and related devices and technologies

International Class 016: Magazines in the field of computers and computer technology

International Class 035: On-line sale of application and operating software and systems for use in wired and wireless devices for a wide range of audio-visual and multimedia technologies

International Class 038: Hosting and operating user groups and forums in the field of computers and computer technology

International Class 042: Software developer support and consulting services

The applicant hereby appoints Darren B. Cohen and Gregory S. Shatan, Susan M. Rosenfeld, Meredith D. Pikser of Reed Smith LLP, 599 Lexington Avenue, New York, New York, United States, 10022 to submit this application on behalf of the applicant. The attorney docket/reference number is 503370/20003.

The USPTO is authorized to communicate with the applicant or its representative at the following email address: dcohen@reedsmith.com.

A fee payment in the amount of \$1625 will be submitted with the application, representing payment for 5 class(es).

**Declaration**

The undersigned, being hereby warned that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. Section 1001, and that such willful false statements, and the like, may jeopardize the validity of the application or any resulting registration, declares that he/she is properly authorized to execute this application on behalf of the applicant; he/she believes the applicant to be the owner of the trademark/service mark sought to be registered, or, if the application is being filed under 15 U.S.C. Section 1051(b), he/she believes applicant to be entitled to use such mark in commerce; to the best of his/her knowledge and belief no other person, firm, corporation, or association has the right to use the mark in commerce, either in the identical form thereof or in such near resemblance thereto as to be likely, when used on or in connection with the goods/services of such other person, to cause confusion, or to cause mistake, or to deceive; and that all statements made of his/her own knowledge are true; and that all statements made on information and belief are believed to be true.

Signature: /Bill McEwen/ Date: 07/28/2006

Signatory's Name: Bill McEwen

Signatory's Position: Managing Director

Mailing Address:

Darren B. Cohen

599 Lexington Avenue

New York, New York 10022

RAM Sale Number: 683

RAM Accounting Date: 07/31/2006

Serial Number: 78940426

Internet Transmission Date: Fri Jul 28 19:25:04 EDT 2006

TEAS Stamp: USPTO/BAS-66108194191-200607281925041679

77-78940426-20052bc143c96db66dd4feb2208d

534f3f-CC-683-20060728192314426291



AMÍGA

**EXHIBIT G**



**United States Patent and Trademark Office**

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**Trademarks > Trademark Electronic Search System(Tess)**

TESS was last updated on Fri Mar 2 04:17:03 EST 2007

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TARR Status ASSIGN Status TDR TTAB Status ( Use the "Back" button of the Internet Browser to return to TESS)



**Goods and Services** IC 009. US 021 023 026 036 038. G & S: Computer software used to facilitate development of software applications that can run on multiple platforms and other electronic devices; operating system software for personal computers and other electronic devices; electronic magazines in field of computers and computer technology; computers, computer peripherals, including telecommunications and computer communications equipment, and computer operating systems; computer disk drives; RAM expansion cartridges and external memory devices; application and operating software and systems and developer support kits for use in wired and wireless devices for a wide range of audio-visual and multimedia technologies, including cellular and mobile telecommunications, smart phones, PDAs, web-based servers, television entertainment, entertainment, games and gaming consoles, personal computing, word processing, Internet applications including web browsing, calculators and related devices and technologies

IC 016. US 002 005 022 023 029 037 038 050. G & S: Magazines in the field of computers and computer technology

IC 035. US 100 101 102. G & S: On-line sale of application and operating software and systems for use in wired and wireless devices for a wide range of audio-visual and multimedia technologies

IC 038. US 100 101 104. G & S: Hosting and operating user groups and forums in the field of computers and computer technology

IC 042. US 100 101. G & S: Software developer support and consulting services

**Mark Drawing Code** (2) DESIGN ONLY

**Design Search Code** 21.03.01 - Balls including playground balls, beach balls, billiard balls, tennis balls, bingo balls and lottery balls; Beach balls; Billiard balls; Bingo balls; Lottery balls; Paddle balls; Playground balls; Table tennis balls; Tennis balls  
25.03.01 - Checker board pattern; Checkerboard patterns

**Serial Number** 78940434

**Filing Date** July 28, 2006  
**Current Filing Basis** 1B  
**Original Filing Basis** 1B  
**Owner** (APPLICANT) Amiga, Inc. CORPORATION DELAWARE Suite 301 167 Madison Avenue New York NEW YORK 10016  
**Attorney of Record** Darren B. Cohen  
**Description of Mark** The mark consists of the design of a checkered ball.  
**Type of Mark** TRADEMARK, SERVICE MARK  
**Register** PRINCIPAL  
**Live/Dead Indicator** LIVE

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