Media Assistant

(The following section to be included with all versions of the document.)

Project Name: Media Assistant	Project Number:
Prepared/ Revised By: [redacted]	Date Prepared/ Revised:
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1.0 Introduction

The purpose of this scoping study is to gather information on the Media Assistant project. This study will document business functions and environment of the project. The current system will be reviewed including function, performance, cost, and limitations.

This study will document the processes the proposed system would perform, in order to effectively satisfy the customer's objectives. Alternate solutions, recommendations, and issues will also be discussed.

2.0 Management Summary

3.0 Business Functions and Environments

3.1 Business Functions

In the Legacy Amiga environment, Remote Modem was used to deliver Graphic Ad files to one or more Amiga TVGC systems via a dialup connection. A Graphic Ad coordinator for one or multiple systems could use a windows application to remotely send graphic files and playlists to each of the systems; eliminating the need to go to each head-end site and insert a floppy disk into the Amiga hardware.

Media Assistant provides Hollywood customers with similar functionality through different design. Media Assistant has a web interface that a company representative can use to upload graphic files and sequencing information to our Backoffice systems. All information will be trafficked to the appropriate target systems for display. One benefit of this approach is that in the need to send a replacement machine, no action will be required by the customer to replace the graphic ads on the target machine; the current ads and playlists will automatically traffic to the new machine.

LAS prespective:

- Strong retention tool for subscribers using remote modem for graphic ads

- Local Ad sales in these systems have already signed contracts

- Cable systems are counting on the revenue that is being generated currently with existing Remote Modem.
- Local Ad Sales in these systems have already signed contracts in 2000 on channel for graphic ads.
- A delivery service of graphic ads will give customers that have head-ends in remote locations the ability to use their local avails. These are areas that are not manned and difficult to get to on a regular basis.
- The ability to change the frequency of ads on the fly without having to reload all graphic ads in the head-end. (Similar to creating a playlist of graphic ads).
- Regional offices that are doing the creation of graphic ads in one system site have the ability to also send the ads directly to the head-ends rather than using a delivery system (people) to get the ads to the appropriate head-end.

4.0 Current System Information

4.1 Current System Description

The Legacy Systems application that is to be replaced by the Media Assistant system is called Remote Modem. This is a standalone, Windows application that allows the user to manage the delivery of text ads and graphic ads to their Amiga TV Guide Channel systems.

For the purposes of this study text ads will not be considered, since they are obsolete and will not be supported on the Hollywood TV Guide Channel product.

In order to use the Remote Modem product, the users create graphic ads using a graphics software package of their choice. They are then able to use the Remote Modem software to accomplish the following tasks.

- Manage play-lists. A play-list is an ordered list of graphic file names and the set of named graphic files.
- Manage head-ends. A head-end is a single Amiga Character Generator computer (CG) providing TV Guide Channel service to a specific locality.
- Manually initiate a transmission of a play-list to a head-end.
- Schedule transmissions of play-lists to head-ends for automatic delivery at a later time.

The key functionalities of this software are outlined below. For a more complete description see the appendix.

- If the graphic is in a recognized format that is not the format supported by the Amiga, the ad will be converted to the proper format if possible.
- After an ad is imported and converted to the proper format, several of its attributes are verified before it can be inserted in a play-list; including height, width, color depth, and interlacing.
- As an ordered list of graphics ad files, managing a play-list includes the following functions; inserting files, deleting files, or changing the order of the files.
- Ads included in play-lists can be reviewed in "thumbnail" or "full-size" displays.
- Each head-end can have multiple play-lists scheduled for delivery and each play-list can be scheduled for delivery to multiple head-ends.
- Delivery of a play-list to a head-end includes transmission of the ordered list of graphic file names and all the graphic files named in the list.
- A play-list becomes effective as soon as it is received at the head-end.
- When a new play-list is received by the head-end, any existing play-list (including the graphics named therein) is deleted.

4.2 Current System Performance and Workload

The current Remote Modem system transmits play-lists to the various head-ends it supports via modem. Because the connection speed is limited to 2400 baud by the target system (see below), the transmission time can be significant for some users. For example, if a user wanted to populate the entire 10 minutes of available local avails with the highest resolution graphics the transmission time required could easily be 35 minutes +/- 5 minutes.

Since the current system is a standalone, Windows application installed on the users local computer the responsiveness of the user interface is largely dependent on the configuration of that machine. However, on any system capable of adequately supporting Windows 9x or Windows NT, the performance of the user interface should be gated by human considerations and not software or hardware performance. Given this consideration, much care was taken to create an efficient interface with the most common actions being performed by single click buttons.

4.3   Current System Costs

With this system we provide a specialized Amiga target that includes the following hardware in addition to the standard CG hardware.

External USRobotics 33.6K Modem
68030 Processor Accelerator Card w/ SCSI II control and 700 MB Hard Drive
UVComm Card Version 4

4.4   Current System Limitations

Transmission speed

As stated briefly above, the receive speed of the Amiga TV Guide Channel target computer is limited to 2400 baud for a combination of hardware and software reasons that are beyond the scope of this document. The transmission times associated with this difficulty are also outlined above as being 35 minutes +/- 5 minutes for a full set of high resolution graphics. This figure is based on the following assumptions and calculations.

Approximate number of bytes to transmit for each system
10 1-min avails * 2 graphics/1-minute avail * 25,000 bytes/graphic = 500,000 bytes

Approximate duration of transmission
500,000 bytes / 230 bytes/second / 60 seconds/minute = 36.2 minutes

The variation in the calculation is based on variability in the compression of the IFF file format used for transmission. IFF graphics at 640x220 in 16 colors are typically between 15K and 60K. a conservative estimate of an average size of 25K per file was used for these calculations.

Exclusive connection

Another limitation of the current system is the fact that while this transmission is in progress, the target can receive no other communications. This restricts the time of day that the user can deliver play-lists to a time of day that does not conflict with the nightly "Blastoff" transmission. This leaves a window of approximately 6:00am CT to 4:00pm CT daily for the transmission of play-lists.

Lack of error recovery

Another problem with the current system is that there is no way to continue a transmission after an error occurs. If the connection is lost during a transmission the entire play-list must be re-sent to insure complete delivery.

5.0 Proposed System Needs

The Media Assistant will be used by the local advertising groups of our customers to create an inventory of graphic ads and organize these graphics into play-lists for delivery to specific Hollywood head-ends. The following specific functionalities are required.

Manage graphic ad inventory.

This includes the abilities to insert and delete graphics to the inventory and to view the individual graphics by filename, descriptive name, graphic "thumbnail", and full-size graphic display.

The ability to add graphics requires functionality to confirm that the image meets certain format requirements including height, width, color depth, and file format. If a file does not meet the specified criteria it will be rejected and not added to the inventory.

Manage play-lists.

A play-list is an ordered list of graphic file names and the associated set of named graphic files. Managing play-lists includes the abilities to create, modify, and delete the lists themselves.

Also, the ability to insert, remove, and order the graphics named in the list by filename and descriptive name as well as review the graphics in the play-list by thumbnail and full size display.

Individual graphics may be included in multiple play-lists.

Manage head-ends.

A head-end is a single Hollywood target providing TV Guide Channel service to a specific locality. Managing head-ends includes the abilities to create, modify, and delete head-end definition records.

Schedule play-list transmissions to head-ends

After defining a set of play-lists and a set of head-ends, the user must be able to schedule start dates and times based on the current Eastern Time standard (EST or EDT).

Only one play-list can be active for an single head-end at a particular time (no day-parting of play-lists).

Individual play-lists can be scheduled for multiple head-ends simultaneously.

If a standard scheduling lead-time of more than 24 hours is required by the general system, a "Rush Order" delivery mode must be available (at an additional fee if necessary to cover add ional operational expenses and prevent abuse). Rush delivery must be completed within 4 hours.

6.0   Alternative Solutions

6.1   Alternative Solutions Considered

1. *Direct Access* – Identical to the legacy system's(Amiga) functionality. We allow the customer to dial directly into the PC unit(s).

2. *Tulsa Storage* – Place a customer with media trafficking application. The customer dials into TVG server to submit new ads and changes. TVG manages the inventory and playlists for each customer and transmits information the field unit(s).

3. *Storage on Customer PC* – The inventory, playlist and schedule is maintained on the customer's PC. The customer would transmit their ad information via email to Tulsa(HSM) the information would be delivered from Tulsa to the PC unit(s) in the field.

6.2   Alternative Solutions Evaluation

Evaluation of option 1(Direct Access) :

> *Advantages:*

> - No functioning Media Trafficking engine required
> - Customer familiarity with process(identical to Amiga process)
> - Limited liability, customer is responsible for the transmission of ads
> - Already close on GUI

- Speed of delivery

Disadvantages:

- Modem required by customer

- Customer's transmissions could possibly disrupt PC dial ups (Diagnostic or Trouble shooting)

- No modem available for TCP/IP configurations(ie Systems requesting IP connectivity rather than dedicated phone line)

- Breach target security

- Possible decrease in performance(ie transmission is received during the same time the PC unit is processing a bus)

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Evaluation of option 2 (Tulsa Storage)

Advantages:

- Easy repopulation(replacement)

- We control delivery of schedule

- GUI already close

Disadvantages:

- Speed of delivery

- Security breach in Tulsa

- App support required

- Client App performance

- Storage cost on HSM

- Increased liability, we'd be responsible for the storage of inventory, playlists and scheduling of the customers data

Evaluation of option 3 (Storage on customer's PC):

Advantages:

- Easy repopulation(replacement)

- We control delivery schedule only

- GUI already close

- High automation

Disadvantages:

- Storage cost

- Speed of delivery

- Liability – Ad delivery

7.0 Recommendation

7.1 Recommended Solution

TBD

7.2 Project Description Impact

8.0 Issues

9.0 Appendices

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9.1 Project Glossary

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9.2 Project Plan

Project Plan, updated for the Requirements Phase.