# Dance Alloy Theater
# Executive Summary

Student Consultant, Eddy Lee
Community Partner, Lauren Urbschat

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## I. Background Information

Dance Alloy Theater (DAT) is a Pittsburgh based non-profit art organization with a mission:

> *To offer opportunities to exercise the muscle of imagination through its performing dance theater repertory company, school and outreach opportunities.*

The organization offers two main programs in delivering its mission. These programs are the seasonal performances by the repertory company and various classes offered through the school.

DAT employs 3 full-time staff and a few part-time staff. DAT also has instructors and dancers that are actively involved in teaching classes and performing in shows. DAT staff uses various technologies, such as email, word processor application, printer/copiers, and telephone, to accomplish their daily work. DAT does not have an internal IT staff, but does have contact to external IT personnel.

## II. Consulting Task

DAT was facing difficulty in managing contact information as it had grown very large, and the information was spread over multiple documents creating redundant duplicates. These caused inefficiency in the use of the information system such that staff needed to spend a significant amount of time to obtain information from the system.

In order to increase efficiency in entry and retrieval of contact information, the student consultant took on the task to revamp the contact information management system by replacing existing system with a new relational database implemented in Microsoft Access. Decision of this implementation was taken together by the community partner (CP) and consultant after comparing it with some other possible solutions.

## III. Outcomes Analysis

The implementation a new database system resulted in a full adoption of the new system by staff. An Access relational database, called DAT Database, was created by the staff and consultant. This database system includes 9 tables, 7 forms, and a growing number of queries as staff uses the database to retrieve new type of information. Latest count showed that 15 queries had been created. Relevant contact information from the old system has also been moved into DAT Database. The use of this new database has completely replaced the old contact information system.

The use of this new database has led to a reduction in the time spent by staff to obtain information. In particular, CP generated a postcard mailing list from DAT Database in few minutes, while it took her two days to generate the same list from the old system. Staff had also generated database queries to generate statistical information about performances and classes. This type of information

was not available in the old system, and staff had to manually go through paper records to obtain this statistical information.

## IV. Recommendations

A couple of technology recommendations were proposed in order to increase DAT capability to support its mission. An online membership service is recommended to increase the number of participants and to keep active participants information up to date while offloading manual data entry works by the staff. This recommendation benefits DAT by increasing the number of events' participant, and maintaining accurate information on these participants. This increase will lead to potential increase of donors. At the same time, an online membership service will decrease the time staff takes in updating contact information, as active members would update their own information through the Web.

It is also recommended that DAT enable local area network (LAN) and install a central server to host shared resources, such as the contact information system. Current observation of resources sharing process shows inefficiency that could be reduced by the use of LAN and a central server. For instance, the contact and class information are stored on CP desktop, such that only one person can access these information at a time. Implementing this recommendation will increase efficiency in staff work processes.

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# Dance Alloy Theater
# Final Consulting Report

Student Consultant, Eddy Lee
Community Partner, Lauren Urbschat

## I. About the Organization

### Organization

Dance Alloy Theater (DAT) is a non-profit organization with a mission;

> *To offer opportunities to exercise the muscle of imagination through its performing dance theater repertory company, school and outreach opportunities.*

DAT was established about three decades ago. It internally consists of two entities, the Company, which is a modern dance repertory company, and the School, which is the education branch. The Company offers performances in two seasons of each year. The performances are choreographed by national as well as international instructors. The School holds classes for anyone who is interested in arts of body movement. People from various range of ages may sign-up for various classes for certain fees. Currently, DAT has 3 full-time staff members with vacuum Managing Director.

### Facilities

The work space of the staffs is in an open space office on the second floor of DAT building. The first floor consists of a studio and break area. Staffs individual work spaces are sufficiently big. The second floor welcomes pass-by-ers, who could be DAT dancers, instructors, students, or other visitors. The third floor is another studio for dancers to practice.

In term of communication facilities, the building is equipped with a telephone switch, a DSL modem for Internet connections, and a Linksys router to share the Internet connection. The office is fully wired with telephone as well as Ethernet lines.

### Programs

The School provides classes to exercise imagination muscles for any interested individual. The classes range from modern dance, social dance, to a yoga class. These classes are held on semester basis taught by hired instructors. Usually there are approximately 20 classes per semester.

The Company offers dance performances to the public in a couple theaters in Pittsburgh. There had been an attempt to gather information on the audiences, and to input this information into an Access table, which was the master contact database, to generate mailing lists for targeted promotion/marketing.

### Staff

DAT staffs consist of three full-time staffs. The Executive Director, who is also acting as the Artistic Director, Beth Corning, the Marketing Director who is the Community Partner (CP) for this consulting task, Lauren Urbschat, and the Education Director, April Gruber. Marketing and

Education Director used Microsoft Access tables and Excel spreadsheet to keep track of students, instructors, and audiences. They are the owner of all contact information in the organization. All staff uses Microsoft Office products to generate documents. Each staff also has their own email account in the organization. All the staffs are relatively new in comparison to the age of the organization. CP in particular, has been in the organization for only 4 months. The most senior staff, the Artistic Director, is also active in teaching a class that is open to professional and semi-professional dancers.

DAT also hire part-time staffs. Individuals who spend a lot of time in DAT building are the instructors, who hold classes and dancers, who practice in the building. There's also a security guard for the building. To assist administration and technology, a part-time accountant, Cathy, is hired to work solely on accounting of the organization using QuickBook. Furthermore, DAT is in the process of renewing their website. This project is currently under the care of an external contractor, Tod. DAT also has an external IT assistance, Chris, who handles devices and network configuration and troubleshooting.

## Technical Environment

The technology equipment breakdown is as follow. Each staff has a desktop machine. CP uses Windows XP running on a Dell PC, where all the Access (2004) databases reside. Other staff uses Mac OS desktop. The Artistic Director also has an iMac laptop. There is also another Windows desktop for currently vacant Managing Director, where the QuickBook application is installed. The accountant works on this PC, whenever necessary. There's also an extra Mac and an extra Windows PC for casual use by instructors and performers. All computers are located on the second floor and are connected to a wired-only Linksys router. The router is connected to DSL provided by the Internet service provider, ChoiceOne. There's also a network printer/copier for staff.

## Technical Management

There is no formal internal technical management. IT support is provided by Chris whenever necessary.

Marketing and Education Director use and manage the organization information system, which consist of Microsoft Access tables, Excel Spreadsheets, Outlook address book, and papers. The Executive Director, take decision whether to purchase technology equipments. Both Marketing and Education Director provide inputs on what they need as an organization.

## Technology Planning

One ongoing technology plan is the building of a new website. It is meant to provide a more professional and artistic image of DAT on the web. It is also planned that some section of the website can be easily updated by the Marketing Director to provide latest information about DAT.

## Internal and External Communication

Internally, communication between staffs is fast and easy due to the small number of staffs and open space office. By raising their voice a little, staff can basically talk to each other from their own work space. The copier/printer is used to generate hard copies of documents to distribute among internal staff as well as external individuals. For instance, year-end-appeal are printed out from the copier/printer.

Each staff has full Internet access with an email account. Email is use for both internal and external communication.

## Information Management

Most information regarding various individual was placed in Access tables. Some newer contacts are recorded in Excel spreadsheets and Outlook address book. There was one main Access table that was the master contact list. This list was an accumulation of information since early year of the organization. The use of Microsoft Access table was started in 1999, and had accumulated almost 10,000 entries. Out of these entries, more than 60% of them had been identified as no longer relevant and/or redundant.

More recently, information on individual classes was stored in different Microsoft Access tables, separated by the semester. These tables are maintained by the Education Director.

Accounting is done with QuickBook, and data is stored on local computer. Electronic files are stored on individual staff computer. There was no scheduled backup, with exception of QuickBook data that is backed-up by Cathy to a USB drive. Last backup of Access tables was done in 2004. The lack of backup placed the organization at a higher risk of losing all its contact information about the donors and students. This would be a set back to the organization as the organization wouldn't be able to notify them about new events and classes that they might be interested in participating.

## II. Scope of Work

### Task 1. Improve Data Management

The organization was facing a challenge in maintaining and utilizing their contact data due to the shortage in capability to facilitate efficient data storage and retrieval of contact information from their information system (audiences, students, donors, and other people related to the organization.) The amount of data that were no longer relevant and the decentralized data location added to the complexity in data storage and retrieval process. For instance, CP spent 2 days to retrieve information from the database to generate a postcard mailing list for about 3000 individuals.

### *Expected Outcomes*

Proposed solution: Build capacities within the staff (In particular Marketing and Education Directors who are owners of contact information) to design, build, and sustain a relational database. The relational database would focus on contact information across multiple types of individual (such as audience, donor, student, and board member) and sources of information (such as ticket sales, class registration, and donation) in Microsoft Access.

Other considered database solutions were not suitable for one or more of the following reasons:
- They require a high involvement to develop and maintain that doesn't suit the organization technical resource and expertise.
- They require a certain amount of cost that is not feasible in respect to the organization need and budget.
- They do not provide some required functionalities that DAT wish to have.

These applications were Paradox, BEA WebLogic, Compass, Salesforce.com and CiviCRM.

| Activity | Expected Outcome | How Measure | Current Measure | Evidence of Change |
|---|---|---|---|---|
| Together with the staff, identify the information that needs to be stored. | List of crucial information. | Have a list. | Current database | Have a list. |
| Staff identifies required information from old database. | List of required information. | Have a list. | Current database with outdated irrelevant information. | Have a list. |
| Assist staff to familiarize with relational DB design. | Staff understands relational DB and can design. | Staff can explain relational DB, and come up with a design. | None | An Access relational DB. |

| | | | | |
|---|---|---|---|---|
| Assist staff to familiarize with Access, aided by materials such as, "Access for Dummies." | Staff implements a simple relational DB. | Implementation of Access relational DB. | Access tables unrelated to each other. | Implementation of Access relational DB. |
| Assist in designing a relational DB for the organization contact. | Database design. | Design exists. | None. | Design exists. |
| Staff implements DB on Access. | A new database. | Database exists. | None. | Database exists. |
| Migration of old data. | Data is migrated into new database. | Data is migrated. | None. | Data is migrated. |
| Verification of implementation. | Staff can input and retrieve information effectively | Staff is comfortable with the new DB. | None. | Staff is comfortable with the new DB. |

**Table.1 Expected Outcomes for Data Management Improvement**

## *Additional Impacts*

The staff spent a significant amount of time to learn and use technology, specifically concept of relational database and Microsoft Access, to improve their data management. In the long run, these skills will help the staff and organization in the future to better manage the digital information that may cover entire aspects outside of the organization contact management.

# III. Outcomes

## Task 1. Improve Data Management. The DAT Database (DATDB)

### *Outcome*

All expected outcomes for this task were met according to their respective measurement methods. They are the requirement and design document, the new relational database which was named the DAT Database, the migration of old contact information, and the regular use of DATDB.

The new technology created from this task is a relational database implemented in Access with customized forms and queries for input and output purposes. All components of the relational database, with some forms as exception, were created by DAT staff with assistance from the consultant.

The DATDB consists of 9 related tables and 7 main forms to add and update information in these 9 tables. Furthermore, by using DAT Database, CP generated queries to create mailing lists targeted to specific individuals grouped according to their involvements. These groups are:
- Current funders and donors.
- Current board members.
- Students and people who voiced interest in receiving school brochure.
- Everyone in the database that will receive postcard.

These targeted communications would lead to increase in interest and sponsor toward DAT programs from the community.

The Education Director also utilized the query functionality to generate class rosters. In the past, to create the class roster she must use different Access tables that recorded classes for each semester.

Staff also had migrated information from old databases to DATDB. This was done in two phases. Consultant assisted the first phase of the migration by monitoring the format of data extracted from old databases. Consultant then walked through the import process together with CP into the DATDB. The first phase successfully migrate 386 contacts information. The second phase was completed by CP two days after completion of phase one. First of all, CP updated old contact database to remove redundant and irrelevant information. Then CP imported the data into DATDB. This second and last phase of migration successfully added the remaining contacts into the database. Information of 3029 individuals from old database is now in the new DAT Database. The remaining 6000 plus entries in old database were deemed as either duplicates or no longer relevant.

The use of DATDB has reduced the time staff spent on data mining.

### *Sustainability*

Staff showed excitement and commitment in the new system by taking ownership of the database development process, which includes requirement gathering, relational database design, implementation, and usage documentation. In particular, all staff contributed in formulating the requirement during informal conversation among staff, as well as a formal all-staff-meeting held by CP. This meeting contributed to the finalization of DATDB requirement and design document shown in Appendix A. Two staff members, including CP, created tables, and queries for DATDB. CP also made modification to the forms that were created by the consultant. Some example of the

forms can be seen in Appendix B, C, and D. After its creation, the database design documentation, had been maintained and updated by CP.

Since the migration of old data into DATDB the staff never refer to the old Access tables and Excel spreadsheet anymore. They have been using only DAT Database to complete their work.

CP had decided to write a step by step manual on how to use DATDB based on her experience. This is intended to support use of DATDB by new staff and interns in the future. A new user cannot be expected to intuitively understand the way to use this database system because of its complexity. Thus, the creation and maintenance of a proper manual will be critical for the sustainability of DATDB.

### Expanded Capacity

An evidence of new capacity is shown when CP generated a mailing list for postcard receivers from DATDB almost instantaneously. In comparison, in the old system CP generated the same list manually and took two days. Initially, staff created new queries in DATDB. Each query took about 10 minutes to create. Then staff copied and made slight modification on these queries to create similar queries. This type of queries took about a minute or two to create. For example, CP created a query to list current board members. Afterward, she used this query to create another query to list honorary board members.

Furthermore, CP used the query function to generate statistical reports on the number of tickets sold per show each season, type of ticket sold, total number of audiences in each show. CP also created a query to calculate results of annual appeals. The education director generated statistical queries on number of students and number of scholarship that was given out in a semester. This information was not stored in electronic format, and could only be obtained by manual search before the DAT Database system was in place.

Aside from the increase in capacity from the use of DATDB, Staff had also implemented a backup process on the contact information. This continuous process decreases the risk of losing contact information that DAT faces.

# IV. Recommendations

DAT mission is to bring opportunities to exercise imaginative muscles to community through its repertory company, school, and outreach programs. DAT will achieve an increase in number of active participants in these programs through the use of technology to support effective external promotion and to create more efficient internal work processes.

Over the course of the consulting partnership, consultant and staff identified and listed a number of challenges and opportunities that DAT faces. Technical solutions and prospective outcomes to these issues were brainstormed and listed as shown in Appendix E.

A recommendation to improve external communication is to adopt an online membership service which provides participants certain benefits and up-to-date information on programs that are offered by DAT. This provides three fold benefits: an increase in number of active members, up-to-date information on these members, and a decrease in time that staff needs to spend entering and updating contact information.

The second recommendation is to setup a Local Area Network (LAN) with a server hosting shared resources. This allows improvement to work processes that requires shared electronic resources.

## Recommendation 1. Provide online membership service

### Background

One issue that was identified during the consulting partnership was the difficulty in collecting participant information and keeping them up to date, especially from performances by the repertory company.

There were also issues with old information where the person has moved to a different address, deceased, or for some reason decided to not participate in DAT events anymore. These changes usually went unnoticed for a long time until a communication mail or brochure was sent and returned again to DAT.

### Description of Recommendation

The online membership service allows interested participants to sign-up for membership and to update their own information at their leisure. This removes the issue with stall information for active members. More importantly, this provides a means for participants of a particular DAT event to express their interest and information before or after the event. As a side effect, staff will spend less time in manual information collection and entry into the contact database.

With this up to date information, DAT will be able to provide marketing material customized to a group of members according to the information provided. Thus, an effective targeted marketing to attract participants of events as well as appeals recipients such that DAT will attract a higher number of participants to future events as well as a higher number of donors.

The availability of online membership also provides current and potential events participants a number of benefits. Members will have flexibility to choose what type of information they want to receive from DAT through an online automated process. A forum, which is usually provided by online membership service, will allow members to have enriching communication with each other about their interests and experiences in the art of dance.

### Approach

1. After the decision to offer a membership service, board and staff members determine the nature of membership, such as the decision to collect fee or not for the service. Board and staff also decide on any incentives to attract participant to sign-up for membership. For example, offering members discounts to DAT performances and classes.
2. Create a task team to lead this project. Due to the close relation of online membership service and contact management system, the owners of current contact management system, the marketing director and the education director, should take leadership role in this task team.
3. Task team researches and compares on available product solutions in providing an online membership. In this step task team select a set of solution vendors and contact them for better understanding on the solutions.
4. Task team presents the research result to board members and directors in order for them to account and decide the budget of this project.
5. Purchase and implement a selected online membership solution.
6. Staff familiarizes themselves with the use and maintenance of the solution.
7. Promote the membership offering through online as well as offline communications.
8. Obtain user feedback through survey.
9. Adjust and improve services according to feedback.

### Outcomes

At the end of this project, DAT will have an online membership system allowing active members to update their own information. This system is expected to:

- Increase the number of contact in DAT database by about 10% on average annually.
- Increase the number of participant in each DAT events by 30 % in comparison to current events due to effective marketing.
- The previous two outcomes will lead to increase in the number of, thus amount of, donors through effective annual appeals.
- Reduce the burden of manual information collection and data entry that is currently done by the staff. A saving of 0.2 Full-Time Equivalent (FTE) in a staff time.

### Resources

Internally, all the staff (there are three currently) and board members provides general direction on the project to make sure it fits into the organization mission. They also decide the nature of the membership.

External resources:

- DAT Participants provide direction and feedback on the services they'd like to receive from an online membership.
- Vendors and their support team provide the full functionality of online membership solution. They also provide support in using and maintaining the system. Contacts to a few potential vendors that have been identified are: Tunesia Winn, (tunesia.winn@compass.net) from COMPASS Technology. Jeff Gordy (jgordy@z2systems.com) from Z2 Systems. Udi Merhav (umerhav@crmorbit.com) from crmOrbit.
- TechFinder website (http://www.techsoup.org/techfinder/index.cfm) is an online tool to find technology providers for non-profit organization. This website provides a list and short description of membership hosting vendors aside from the three that was listed.

- Center for Arts Management and Technology (CAMT) (http://www.artsnet.org/camt/) is an organization that helps arts organization in their process of adopting and maintaining technology. Cary M. Morrow (cmorrow@cmu.edu), the Executive Director, is a main contact person in CAMT, and she is familiar with DAT activities.

### Cost

In taking up this project staff members will spend their time in formulating, researching, implementing, and train for an online membership solution. During these times it is expected that each staff will spend 0.2 FTE on average.

Using Z2 System NEON solution as a benchmark, hosted membership service may provide following features: (Screenshots of NEON is shown in Appendix F and G.)
- Event management and ability to post events list online.
- An email program that allow sending of mass email in HTML format, newsletters, and to track their results.
- Online member database system that's accessible using an Internet browser.
- Customizable data fields in the database system.
- A forum that allows members to communicate about pre-set topics.
- An online store to sell goods or classes.
- Mail merge capability allowing export of campaigns to Word documents.

The purchase and maintenance of Z2 System NEON solution will cost: $399.00 for a one time setup. $99/month for 1000 – 5000 members or $150/month for 5000 – 10000 members. (An addition of $60/month for every 20000 members over 10000)

## Recommendation 2. Setup a Local Area Network (LAN) with a server hosting shared resources

### Background

Inefficiencies were identified in some resources sharing process in DAT. First identified issue is the process involved in database access that is located on a staff desktop PC. Since more than one staff need to access this database, staff must take turns in using this desktop. Moreover, the main user of this desktop cannot utilize other applications and documents on her own PC while it is used by another person.

Also, currently staff shares electronic files through the use of email. A file would be attached to an email when it is requested. This creates a longer response time for staff who needs to use a file on another staff desktop. Since different documents are located in different desktop PC, backup process is also more complex. Backup will need to be done across multiple desktop machines.

Currently, DAT office is already fully wired with Ethernet cable and has sufficient infrastructure to support a LAN environment. There are also two Windows desktops and two Mac desktops for full-time and part-time staff. There are also two extra desktops for casual use, such as checking email and web browsing. These desktops are intended for dancers and instructors. One of the desktops is running Windows OS and the other is running Mac OS.

### Description of Recommendation

A LAN and a server to host shared resource will allow staff to share common resources more efficiently. This will reduce time spent by the staff to forward information among each other. It will

also remove time spent in idly waiting for access to a particular resource while it's being used by another staff, such as the contact database.

The effect of time saving will amplify as the organization grows in number. In particular, after a Managing Director and interns join the DAT. Using the server as the main file storage and sharing device will also allow an efficient backup process. Backup will concentrate on a single location, namely the server that holds crucial information.

In order to build this LAN, two new desktops for staff and a new server machine are recommended. Current staff desktops are in used and should be kept in use, with the education director Mac desktop as an exception. This Mac desktop is an old system that is no longer suitable to run recent applications and has a high probability that it would face difficulty in interoperating with a Windows server that will be installed in the LAN. Under similar argument, the extra Windows and Mac desktops are not suitable to handle workload required by DAT staff, and they should remain for casual use by instructors and dancers. One of the two new desktops will replace the education director current Mac desktop, and the other one will be used by part-time staff, such as the accountant and interns.

A server machine is recommended to provide appropriate resource to host shared application, such as the Access based DATDB. It's also required to handle large hard drive sizes that will hold many files, including video clips of dance trainings and performances that will consume significant space on the hard drive.

Under the consideration of achieving a long usage life time, it is recommended that new desktops meet or exceed the following specifications:
- Processor: effective 1 GHz.
- System memory: 1 GB.
- Graphics memory: 128 MB of graphics memory.
- Hard drive: 80 GB.
- DVD-ROM.
- LAN access capability.
- OS: Windows XP with SP2.

Under similar consideration, the server machine should meet or exceed the following specifications:
- Processor: effective 2 GHz.
- System memory: 2 GB.
- Graphics memory: 128 MB of graphics memory.
- Hard drive: 200 GB. Could be multiple physical hard drives.
- DVD-ROM/CD-RW combo.
- LAN access capability.
- OS: Windows XP Professional with SP2.

Access to resources requires access control mechanism, more so in a LAN environment with shared resources. Access controls to the LAN, server, and individual desktop are as the following:
- Systems in the LAN are set to a common workgroup.
- Each desktop requires users to login using their own credential. A user should not have a credential in other staff desktops.

- Each staff also has credential set up on the server to authenticate themselves into the server and access the resources. These credentials should be set at User level to limit their capability in changing the system configuration. Users are allowed to connect remotely.
- Administrative account of the server is owned by one of the director, and should be used only for updates or troubleshooting on the server. This account should not be allowed to connect remotely.
- Remote access from outside the LAN (i.e. from the Internet) should not be allowed.

In addition to having a LAN environment, a new backup process is also recommended. By utilizing the new server, a more efficient backup process can be achieved. It is recommended that staff continue using current backup technology, the CD backup, in the new environment. However, instead of backing-up data across multiple desktops the backup shall be done on the server, which will contain critical data such as the DATDB.

### Approach

1. Create a task team to lead this project that includes DAT external IT personnel. Task team should be led by one of DAT director who will works closely with the IT personnel.
2. Task team investigates current computer systems and infrastructure to decide on purchase of equipments that are needed to enable the LAN.
3. Task team decides on security considerations, such as access control to each desktop and the server. Task team then incorporate this in selection of product and configuration.
4. Task team finalizes and documents a purchase list, which will mainly include a server and a couple workstations running Windows XP SP2.
5. Purchase devices.
6. Install and configure LAN, desktops, and the server. Mainly carried out by DAT external IT personnel.
7. Task team creates documentation on LAN configuration and usage manual.
8. User test and feedback.
9. Adjust configuration as necessary.

### Outcomes

At the end of this project, DAT will have a LAN with a server hosting shared resources. This system will:
- Allow staff to access the contact database from their own workstation, removing all idle time where a staff must wait for another staff.
- Allow electronic files to be placed on a share folder on the server, removing all overhead time where a staff must request and wait for email from another staff for the file. This could span into days in the case when the staff that holds the file is not in the office.
- Allow efficient and thorough backup process.

### Resources

Internally, all the staff (there are three currently) provides input on the requirement of the LAN. Current computers will be kept in use and will be connected to the LAN. Finally, DAT owns a couple of Linksys router which can be used to create the LAN.

External resources:
- DAT external IT personnel who will setup the LAN and server. He can also provide advices on device purchasing.

- Vendor websites provides information on computers to purchase. Recommendation for cost efficient systems is www.Dell.com. According to the recommended specification, desktop system that is considered suitable for staff is Dell OptiPlex 745 or equivalent. A suitable server system is Dell PowerEdge 840 or equivalent.

### Cost

In taking up this project staff members will spend their time in purchasing equipments and familiarizing themselves to the LAN environment. During these times it is expected that each staff will spend 0.05 FTE on average.

Using brand new Dell systems as benchmark, each computer (including the server) will cost on average $500. IT personnel time will cost approximately $50/hour. Three computer system and a four hour consultation and installation time will incur a one time cost at about $1,700.

## About the Consultant

Student consultant in this partnership is Eddy Lee, a candidate of Master of Science in Information Security Technology and Management. Eddy is in his last year of the master program, and is planning to pursue a career in information security strategy.

## Appendix A.

DAT – Data Management System
Phase I. Fall 2006

# Requirement and Design Document

The main purpose of this new data management system, DAT Database, is to enable effective storage and retrieval of contact information of various parties involved in DAT events and activities.

## System Definition

Functional

An information system that allows efficient contacts data entry on a centralized interface, and generates various reports based on the stored information. Main type of report is mailing lists based on the role of the individuals.

The system stores and returns information in such a way, that they can be easily shared with other similar organizations.

Technical

The data management system is a Microsoft Access relational database, focused around storage of individual contact information.
The database also stores information related to performances and classes.
The database relates each person to their interaction with DAT. For example, through buying tickets at performances, or registering in a class.

# System Requirement

<u>Functional</u>

The completed system supports data storage from two main DAT programs; Contact information for students in the classes, and for audience/participants in the performances. It will also allow storage of other individuals that are related to DAT differently.

Desired reporting capabilities:
- Class Roster.
- Mailing List, based on the involvement of individuals.

| Type | Target Group |
|---|---|
| Performance Invitation | o Entire Database |
| School Brochure | o Current and Past Students.<br>o Ticket Buyers<br>o Board.<br>o Individual Requests |
| Year end appeal | o Donor.<br>o Past Board/Honorary Board<br>o Ticket Buyers<br>o Current Students |
| Summer Intensive Postcard | o National Dance Departments<br>o Past Summer Intensive Students<br>o Individual Requests |

- Statistical report
  - Result of year end appeal.
  - Number of ticket sales.
  - Number of students

<u>Technical</u>

The system is a single relational database. Table requirement is defined below.

Person
- Name and courtesy.
- Address.
- Telephone.
- Email.
- Company.
- Affiliation. Identified to add in this table; Dance Department, Media, Presenter, Summer Intensive, Board (Past/Present, Honorary), Guest Artist and Dancer.
- Spouse.
- Source of information.

Performance
- Season
- Date/day
- Time
- Title

Ticket Sale
- Payment type.
- Number of tickets bought. Break into adult, student/senior, and special tickets.
- Amount paid.

Class
- Season.
- Day/Time
- Class code.
- Instructor. Note: One instructor only per class.

Class Registration
- Payment type. Could be scholarship and/or gift certificate.
- Amount paid.
- Parent.
- Partner.

Donation
- Amount.
- Date.
- Program/Event

Fund

- Amount.
- Date.
- Program/Event

Sponsor
- Equivalent $ amount.
- Date.
- Event.
- Detail of sponsorship.

Board
- Current (y/n)
- Honorary (y/n)

```
┌──────────────┐      ┌──────────────┐      ┌──────────────┐
│ Performance  │      │  Board Type  │      │    Class     │
└──────┬───────┘      └──────┬───────┘      └──────┬───────┘
       │                     │                     │
┌──────┴───────┐      ┌──────┴───────┐      ┌──────┴───────┐
│   Ticket     │──────│   Contact    │──────│    Class     │
│   Sales      │      │              │      │ Registration │
└──────────────┘   ┌──┴────┬─────┬───┘      └──────────────┘
          ┌────────┘       │     └──────────┐
   ┌──────┴───────┐  ┌─────┴──────┐  ┌───────┴──────┐
   │   Donation   │  │   Grant    │  │ Sponsorship  │
   └──────────────┘  └────────────┘  └──────────────┘
```
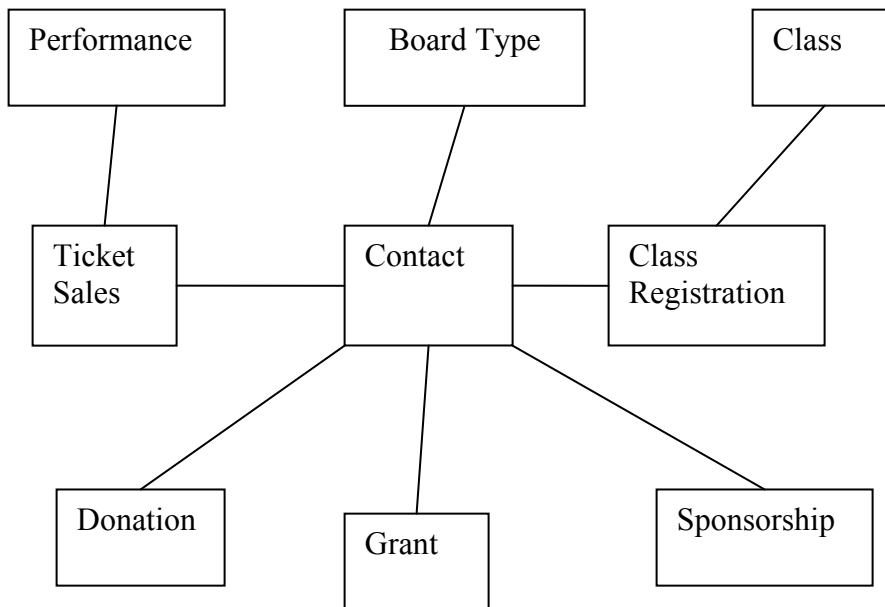
**Figure.1 High Level Entity-Relation diagram.**

Ideas for Queries
- List of current Funders
- Past, Present, Honorary Board
- School Brochure Mailing
- Summer Intensive Mailing List
- Annual Appeal Mailing List
- Annual Appeal Totals
- Tickets sold per show, per year

- Class Rosters
- Students per semester, per year
- Total income of school per semester per year
- Total scholarships per semester per year
- Outreach Mailing
- Program Ad Sales
- Café Alloy Donations
- Board Donations

# ACCESS Implementation

**Tables Details**

CONTACT
- **Contact ID (Automated)**
- Courtesy Title – text 4
- Job Title – Text 30
- First Name – Text 20
- Middle Initial – Text 4
- Last Name – Text 20
- Spouse Courtesy Title – text 4
- Spouse First Name – Text 20
- Spouse Middle Initial – Text 4
- Spouse Last Name – Text 20
- Company – Text 50
- Address 1 – Text 30
- Address 2 – Text 30
- City – Text 20
- State – Text 4
- Zip – Text 10
- Country – Text 15
- Phone – Text 20
- Fax – Text 20
- Email – Text 50
- Information Source – Text 50
- *Board ID – Number*
- Send School Brochure – Yes/No
- Send Summer Intensive – Yes/No
- Dancer – Yes/No
- Instructor – Yes/No
- Guest Artist – Yes/No
- Dance Department – Yes/No
- Media – Yes/No
- Presenter – Yes/No
- Outreach – Yes/No

PERFORMANCE
- **Performance ID (Automated)**
- Date – Long Date
- Time – Text 15
- Title – Text 50
- Season – Text 10

CLASS
- **Class ID (Automated)**
- Class Code – Text 5
- Semester – Text 9
- Class Title – Text 50
- *Instructor ID - Number*

CLASS_REGISTRATION
- **Class Registration ID (Automated)**
- *Class ID – Number*
- *Contact ID – Number*
- Payment Type – Text 100
- Amount Paid – Currency
- Partner – Text 100
- Child Name – Text 100

TICKET_SALES
- **Ticket Sale ID (Automated)**
- Payment Type – Text 10
- Number of Adults – Number (fixed non decimal)
- Number of Students/Seniors – Number (fixed non decimal)
- Number of Complementary – Number (fixed non decimal)
- Amount Paid – Currency – Number (fixed non decimal)
- *Performance ID*
- *Contact ID*
- Special Promotion – Text 20

BOARD_TYPE
- **Board ID (Automated)**
- Board Type – Text 10

DONATION
- **Donation ID (Automated)**
- Date – Short Date
- Amount – Currency
- Program/Event – Text 50
- *Contact ID*

GRANT
- **Grant ID (Automated)**
- Date – Short Date
- Amount – Currency
- Program/Event – Text 50
- *Contact ID*

SPONSORSHIP
- **Sponsorship ID**
- Date – Short Date
- Equivalent Amount – Currency
- Program/Event – Text 50
- Detail – Memo 500
- *Contact ID*

## Relationship
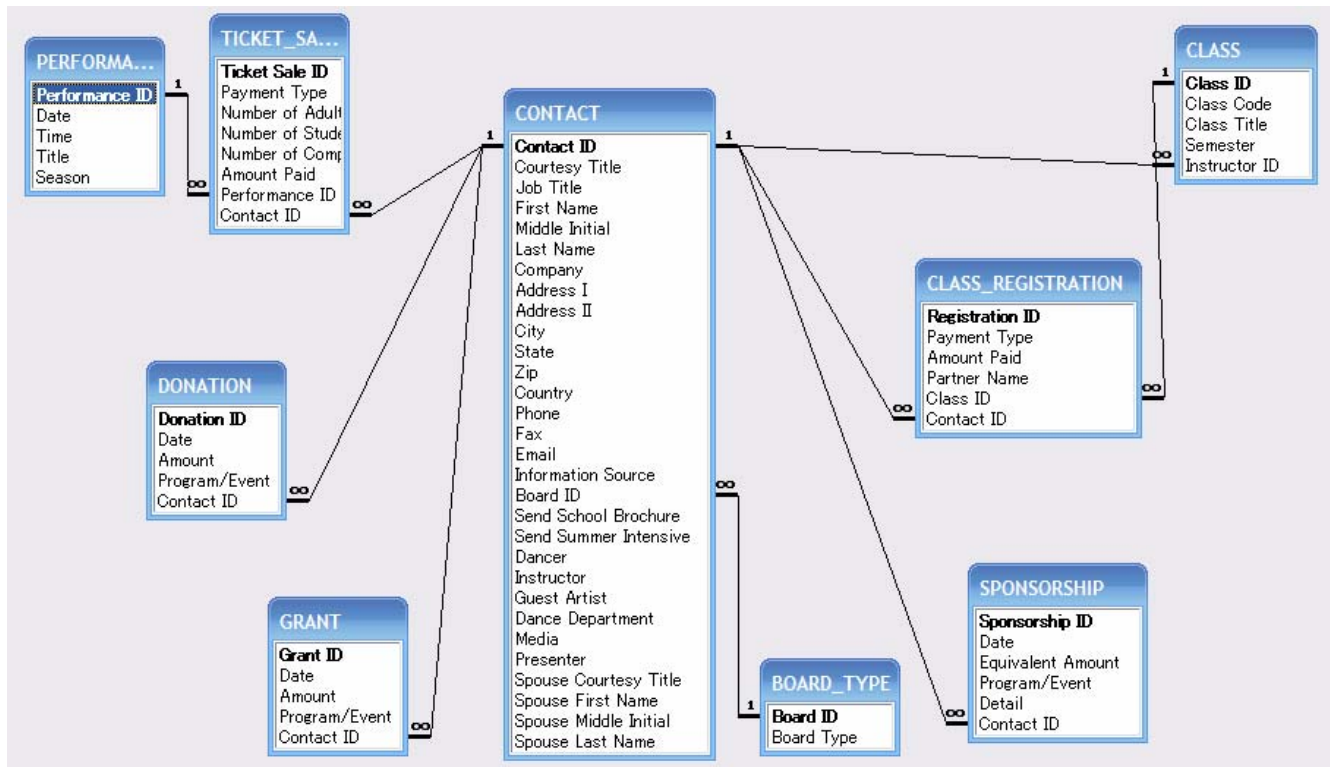


**Figure.2 Access Relationship diagram.**

# Appendix B.

# Appendix C.

# Appendix D.

# Technology Ideas

## Identified Opportunities

1. Unavailability of efficient contact management system.
2. Risk of losing information in case of software/hardware failures or incidents.
3. DAT owns a website where allow prospective students to register for classes. DAT can use the web for similar activity such as sign-up or reservation system for shows tickets and online survey.
4. Decentralized digital files/data.
5. High volume of voice calls especially during pre-showing days.

## Proposed Technology Integration

1. A sustainable relational database. *Complete..*
2. A backup system/methodology. Either automated or manual. *In progress.*
3. Online forms.
4. A Local Area Network and a new server to act as centralized storage. May use this server for database server as well, which will allow sharing and more efficient use of data.
5. An automated voice answering system for incoming phone calls.

## Forecasted Outcome

1. A database that support DAT requirement of contact information storage and retrieval.
2. Reduce severity in case of computer failures or incidents. [This can also act as an archive of information if implemented and stored on read-only media, such as CD.]
3. More recorded information on a centralized system about audiences and community.
4. An efficient way of sharing and storing data which will lead to reduction of the time spent by staff to manipulate data. This further lead to more time for staff to on other task.
5. Provide consistent and complete information to callers without needing live attention from staff. Especially valuable for answering common questions regarding performance, such as time and price.

# Appendix F.

# Appendix G.



**Donation: Home**

## Summary

| | Donors | Donation # | Donation | Pledge |
|---|---|---|---|---|
| Today | 0 | 0 | | |
| This Week | 0 | 0 | | |
| This Month | 0 | 0 | | |
| This Year | 33 | 40 | $3,732.00 | $.00 |

### Search
Search for keywords:

[ Search ]

Advanced Search   Full Search

### Recent Activities
- 11/09 - Account Creation for alice alice
- 08/11 - Account Creation for Jeff Gordy
- 06/30 - Account Creation for bengu dogruer

More...

### Web Links
- Forum
- Live Chat
- Dance Alloy

### Recent Donations  [ View All ]

| Amount | Date | Donor | Detail |
|---|---|---|---|
| $15.00 | 2006-08-17 | June Diaz | |
| $60.00 | 2006-08-17 | John Doe | |
| $100.00 | 2006-08-17 | Craig Steveson | |
| $190.00 | 2006-08-17 | Jennifer Doe | |
| $100.00 | 2006-08-15 | Michael Jordan | |

### Recent Pledges  [ View All ]

| Amount | Date | Donor | Detail |
|---|---|---|---|
| $50.00 | 2005-11-11 | John Doe | (Pledge) Payment received: $50.00 |
| $270,842.00 | 1999-08-31 | The Baldwin Company | In honor/memory of Anna Ware (Pledge) Payment received: $233,903.00 |
| $100,000.00 | 1999-06-01 | Peggy Parrish | In honor/memory of Rolando Abbott (Pledge) Payment received: $100,000.00 |