Doug Frichtel
Eileen Loh

**Lovegety**

**Introduction**
The Lovegety originated in Japan as the next generation Tomogachi toy. Its purpose is to help match people up based on their interest and hobbies. The user has the opportunity to enter their preferences onto the toy and when they encounter another user with matching interests both their Lovegety will beep. Each of the paper relate to each other in describing features and popularity of this new toy. Unfortunately there was no published source package or code for the Lovegety.

**Background and Related Work**

**SECTION 1**

**ARTICLES FOUND IN RESEARCH**
When we set out to implement our program we read many articles describing the Palm and the Lovegety such as.

The company that makes this toy is **INTERLAND**

*******************************************************************************
* The Company official Site   *
* **http://www.interland.co.jp/index.html**    *
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**Article on the Lovegety**

**http://www.interland.co.jp/gety/**

1. Includes instructions on usage

   A.“How to Operate” (article in English).

**Lovegety: How to operate**

1. Turn on the power and set the MODE button you want with MODE button.
   You can confirm the MODE you chose as the red indicator blinks.
2. GET lamp blinks when (someone with) a Lovegety for the opposite sex to yours set under the same MODE as yours comes near.
3. FIND lamp blinks when (someone with) a Lovegety for the opposite sex to yours set under some different mode from yours come near. In that case, you may try the
other

MODES to “GET” tuned with (him/her) if you like.

2. Features
Article with this useful picture describing the features of the Lovegety

http://www.interland.co.jp/gety/index.html

3. This illustrates mode and more details on the Lovegety. It mentions restrictions as to distance and functionality restrictions.

http://www.commerce.usask.ca/faculty/links/E_commerce/lovegety.htm

Lovegety operates within a 15-foot range. To use Lovegety, just set it to one of your favorite activities – "karaoke," "chat," or "friends" -- and wait for the flash

4. This site is Super Cute. It gives a users perspective on the Lovegety. It has her love letters, message, information, and many many details.

http://www1.plala.or.jp/kanausagi/main.htm

SUMMARIZATION

All the articles I read talk about Lovegety’s features, popularity, and impact on the Japanese Society. That is their similarities, however each article has its own view on the purpose of the Lovegety. In general it is a toy to assist introduction of people. The How to Operate article is a very useful set of instruction that gives the reader a clear understanding into how the Lovegety works.

SECTION 2

PALM DOCUMENTATION
We used the Palm OS Tutorials for Window, i.e. the Memo Pad Example. We used the Start Up, Creating a Button, Form, Menu, database, and so forth. Then after completion of necessary sections we began implementing out version of the Lovegety for the Palm.

This can be found in the Code Warrior Lite for Palm OS. This software is downloaded from the Palm development site.

SUMMARIZATION

The documentation gave us a sense of approach. It taught us the procedure for creating an application for the palm.

Project Specification

We are setting out to build our own version of the Lovegety. The software we are designing is to utilize to palm as if it was the original Lovegety. The input is answers to question given by the user. The output would be a signal that a match is found with another owner with our software installed on the palm. It doesn’t assume any data format. The answers are obvious when the user sets up their profiles how to enter their information. We are trying to make the answers unambiguous and control the format of the information so that matching information is more convenient. It accesses a database where we store the user’s information to transport across using the beam function. The users must be relatively close in order to receive signals from each other. The first release will be on the Palm 3. We are assuming that users will have a later model than the Palm 3.

The platform-specific issues.

We are assuming that the Palm Lovegety will run on all Palm III and later models of Palm. We developed our application on the Palm III with OS 3.0 so anything earlier OS models might not have the libraries needed to run our application. Currently we are using the IR port so one constraint is distance. We are only using the palm organizer and no other extra devices.

The user interface.

Our software runs as a Palm OS application. The icon used to represent our Palm OS application is a HEART. After enter the application the user sees 3 buttons (the Exit, Search, and Setup). See figure 1. When they tap on the heart they have the option to update their profile or beam to search for prospective matches.

Users can choose their mode of operation. The user sees modes A (Lets Get to Know One another), B (Let’s go Party), and C (Lets GET IT ON). Then they can choose their sex either Male or Female. There is no need for the user to configure, set or change any of the User interfaces.
Project Design
Currently the Modules include the Interface, the Database, the Compare, and the Beam Function.

Interface
This module takes in the User information and calls Database to store the information. We restricted the input method so that the user may only use push buttons. These buttons correspond to integer values to store the information. Only one button can be selected out of a group. We are using integers in the Database to store the values. There are no actual text data in the user inputs.

Database
We started by using Database Tutorial. Then we modified it to fit our needs. We tested this function through the debugger and the values for the variables are correct while we are stepping through our program. The memory size restricts this function. The data can only hold so much information based on memory available.

Compare function.
This function compares the integer values retrieved with the integer value in the database. If it is an exact match then an alert will be displayed indicating that a match is found. If another palm has the application running with an opposite sex, an alert will also be displayed. Stating a match has been found. Current restriction is that only an exact match will indicate that a match has been found. See Fig 1.3 and Fig 1.4
In the future we don’t want the Compare function to only return true if an exact match is found. We want to be able to set a percentage “P”, and if the data matches a percentage P or greater the function will also return true.

Beam Function.

This will beam our integer string across to another palm and also retrieve information from the other palm. The data should be the correct type to input into the Compare function and be compare it with the information in its database. Restrictions include the distance between the two Palms for the function to operate properly.

We are not using Data Structure such as lists and arrays; we are storing our information as an integer in a structure.

Development Plan

The development environment we are using is the Code Warrior Lite and C. One can obtain a copy from the Web at http://www.palmos.com/dev/tech/tools/.

There is no version control software. When the user saves their new version from our site, it will automatically replace the previous version. It won’t work with other versions because the data format and questions will not be the same.

Test cases are used for test the database, compare and beaming. The test case for the database and the compare function are the same and consists of two sexes and 3 modes for each sex. The database was tested, with the debugger, to see if that all values sales
correctly in the database. The compare function was tested with the same values as the
database. The compare function was tested by the opposite sex with each mode and same
modes. The function was also tested with same sex and each mode.

The project development schedules for our group started out very vague and became
more structure after working on the project awhile. First my partner and I began the
project with a very broad idea with multiple questions and a compare function that would
calculate the percentage of a match of the question. After try to develop the plan and
having numerous problems, we simplified the plans to the basic Lovegety, three modes to
choose from and the user’s sex. The project development schedule became user
interface, Eileen, Database, Beaming and Compare function for Doug. The finish parts
from the development schedule are user interface database and the compare function.
Beaming and receiving functions were in the debugging stage at the time of the finial
presentation.

**Project Evaluation**

**Qualitative**

First my partner and I began the project with a very broad idea for the Lovegety with
multiple questions and a compare function that would calculate the percentage of a match
of the question. After try to develop the plan and having numerous problems, we
simplified the plans to the basic Lovegety, three modes to choose from and the user’s sex.
The project development schedule became user interface, database, compare function and
beaming. User interface was completed from within a week with the project. The
compare function was designed within the same amount of time. Database development
start after the compare function and took 3 weeks to work all the bugs out. That left a
week for the beam. The finished parts of the development schedule are user interface
database and the compare function. Beaming and receiving functions were in the
debugging stage at the time of the finial presentation. Expandability of the existing and
new functions is possible without rewriting whole functions. All the function integrated
together, however some functions did perform as expected.

**Quantitative**

The Lovegety for the palm design uses available API’s as well as existing functions from
the MemoPad examples given in the tutorial. Expandability of the existing and new
functions is possible without rewriting whole functions. All the function integrated
together, however some functions did perform as expected. The total size for the
Lovegety’s memory footprint is 7K.

**Concluding Remarks**

Programming a project of this size takes lots of patience, organizing, preplanning, and
breaking down into simple tasks is an essential part in order to complete the overall goal.
The remaining work consists of debugging the beaming module. We started from a large goal and later found that a smaller more concise goal is more obtainable within our time limit. So from this lesson we learned that it would be better to start with a simple goal and expand out from there after implementation is working.

Credits
Eileen Loh                   Doug Frichtel
Student ID 52114493         28987668

Final Paper               Finial Paper
  Background               Development Plan
  Project Specification   Project Evaluation
  Project Design
Palm                      Palm
  User Interface           Implementation Coding

The Lovegety’s code started from the MemoPad 6 example and was modified for our use. Examples of beaming from the Palm Programming book were used for the our beaming functions. The code may be viewed on www.ece.uci.edu/~dmfricht/Week10.html
Bibliography

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O’Reilly, Palm Programming Book