CS 159.3 PROGRAMMING PROJECT 2: MYSMSD (MY LITTLE SMS SERVER

1. Goals

The goal of this programming project is to test the student's proficiency in systems programming concepts including but not limited to signals, semaphores, file handling, threading and networking.

2. Specifications

Write a program in C that does the following:

(1) the program is compliant to the Nokia Computer Interface to Message Distribution Interface Specification 2 (CIMD-2). the specification can be downloaded from `http://ncsp.forum.nokia.com/downloads/nokia/documents/CIMD_spec.pdf`
(2) a minimal amount of the specification must be implements to write a simple CIMD server and CIMD client.
(3) the CIMD client is called mySMSclient and is a command line tool for sending SMS messages to the mySMSD server. the client is invoked using ./mySMSclient ¡cellphone number¿ ¡message¿
(4) the mySMSD server receives the message. it must at least support the following operations: cancel, send and receive.
(5) the particular output will be discussed in class
(6) must catch all program termination signals and exit server properly
(7) do not allow key board interrupts
(8) must be multi-threaded
(9) must be a TCP/IP server running in port 8080 (note that only one group is allowed to use that port at the same time. so if you are developing at penoy, it would be good to use another port first and change it to 8080 when you are going to submit)
(10) must detach from running console
(11) must guard against buffer overflows
(12) include a Makefile that allows for the following targets: clean, all, default, mySMSclient and mySMSD. the targets all and default build both the client and the server.
(13) include a rudimentary man page
(14) include a README file that describes the nature of the program and how to compile, and run the program (description in plain language)

3. Notes

- ⋆ Program must be compiled with the -Wall and -Werror flags.
- ⋆ Program must abide by the class' coding standards.
- ⋆ Program is due on February 20 2004 @ 12:00NN.
- ⋆ Name of the source file must be "mySMSD.c" and "mySMSclient.c".
- ⋆ All the files must be tarred and compressed. The file name must be "<family name A>-<family name B>.tar.gz". For example, chua-yu.tar.gz.

- ⋆ Only maximum total bonus of 10 points can be attained.
- ⋆ No bonus will be given if the program breaks or ends abnormally - regardless of the options or early bird submission.
- ⋆ Late submission will be deducted 10 points for each day (Sundays and Holidays Included).
- ⋆ Final submissions must be emailed to the instructor (Mr. Yu for CS 23 B) at wyy@penoy.admu.edu.ph.
- ⋆ Students should not edit or create a new tar.gz file in penoy. If in the case of undelivered mail, the date of last creation the the tar.gz file will be used as the basis of the project submission.

4. Grading

20%	Program compiles, links and executes properly
10%	Program includes the Man pages and a working Makefile
35%	Server works: simple multi-threaded mySMSD server
20%	Client works: simple mySMSclient SMS client
10%	Proper signal handling and threading
5%	Program must follow proper coding and documentation standards
10%	BONUS: application is novel or has heuristics (must inform teacher ahead of time)
10%	EARLY BONUS: for those who can submit the program by February 18 2004 @ 12:00NN

Department of Information Systems and Computer Science, Ateneo de Manila University, Loyola Heights, Quezon City, 1108 Philippines

E-mail address: wyu@ateneo.edu