

CSC-400 Kleptomania Infrastructure TimeServer Specification

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1 Introduction

The goal of the time server is to send to all interested parties the time tick signal with the current round number, period number, seconds remaining to the end of period, and pause status.

All strings that are sent from the TimeServer are sent in the JAVA modified UTF-8 format. Technically, they are sent using the `DataOutputStream.writeUTF` method. See JAVA API documentation for reference.

2 The TimeServer program

The time server is implemented as a JAVA application TimeServer. After executing

```
java TimeServer PERIOD_LEN
```

the server initializes, and enters pause state in the *red* period with 5 seconds remaining to the beginning of the game. `PERIOD_LEN` is the length of each period in seconds.

2.1 Registering with TimeServer

To register with TimeServer one has to make a TCP connection to port **9991** on the machine where TimeServer runs. No data is transferred; TimeServer gets all information it needs from the TCP/IP connection status.

2.2 Time signal

To send a time tick, TimeServer connects to all registered machines on port 9990. The time signal has the following format:

```
TICK:<round>:<period>:<seconds>:<pause>\n
```

Where:

- <round> is the round number, starting with 0.
- <period> is the period number; see below.
- <seconds> is the number of seconds that is left until the end of current period;
- <pause> is 0 if time is running normally, and 1 if time is paused.

The following numbers were assigned to periods:

- 0 – red period;
- 1 – blue period;
- 2 – green period;
- 3 – yellow period.

Note that the red period is before any other periods. This is because one does not really need a pause after the last round, but it is useful before the first one.

No time ticks are sent while system is paused.