```
Station
- mID: int
-_userName: string
- mStartTime: int
- mActiveTime: int
- mStoptTime: int
- mSubKey: size t
- mBlocked: bool
- mAlive: bool
+gietBlocked(): bool
+getTerminated(): bool
+getID(): int
+getUserName(): string
+getActiveTime(): int
+unblock(): void
+block(): void
+message(msg: string, senderID: int, senderName: string): void
+terminate(cycle: int): void
+updateTime(): void
```

```
Monitor
- mNet: Network
- loginData: map<string, string>
- time: int
- randEngine: default random engine
+ execute (command:\ netWorkCommandPOD,\ logFunction:\ const\ function < void(string) >
): bool
+getBlockedStations(): vector<int>
+getActiveStations(): vector<int>
+getTerminatedStations(): vector<int>
+getAliveStations(): vector<int>
+getAllStations(): vector<int>
+getBlockedID(id: int): bool
+getTerminatedID(id: int): bool
+getUserName(id: int): string
+getNetworkState(): deque<Station>
+updateTime(): void
```

Simulator

- randEngine: default random engine
- -_currentCycle: unsigned int
- mMonitor: unique ptr<Monitor>
- chance Accumulators: vector<float>
- vecEventGenerators: vector<uniform real distribution<float>
- phrases: vector<string>
- config: map<configType, configValue>
- loginDataSet: map<string, string>
- -_vOnStationsPerCycle: vector<int>
- logDesc: std::ofstream
- -loop(): void
- -printStats(): void
- -manageEvent(type: configType): void
- +runSimulation(file: string): void
- +updateTime(): void
- +logEvent(string event): void

Network

- mClients: deque<Station>
- time: int
- randEngine: default random engine
- idGenerator: uniform int distribution<int>
- +getBlockedStations(): vector<int>
- +getActiveStations(): vector<int>
- +getTerminatedStations(): vector<int>
- +getAliveStations(): vector<int>
- +getAllStations(): vector<int>
- +getBlockedID(id: int): bool
- +getTerminatedID(id: int): bool
- +getUserName(id: int): string
- +getNetworkState(): deque<Station>
- $+ broadcast (cmd:\ netWorkCommandPOD,\ onlyToBlocked:\ bool):\ void$
- +command(cmd: netWorkCommandPOD): void
- +addStation(uname: string): int
- +updateTime(): void

${\bf Clock Subject}$

- -_randEngine: default_random_engine
- -rand Gaussian: uniform_int_distribution<size_t>
- -_mObservers: map<size_t>
- $+ registerObserver(observer: function{<\!\operatorname{void}()>\!): size_t}$
- $+ unregisterObserver(obsID: size_t): \ void$
- +notify(): void
- +get(): ClockSubject

${\bf netWorkCommandPOD}$

- +type: enum
- +senderID: int
- +receiverID: int
- +time: int
- + senderName: string
- +msg: string