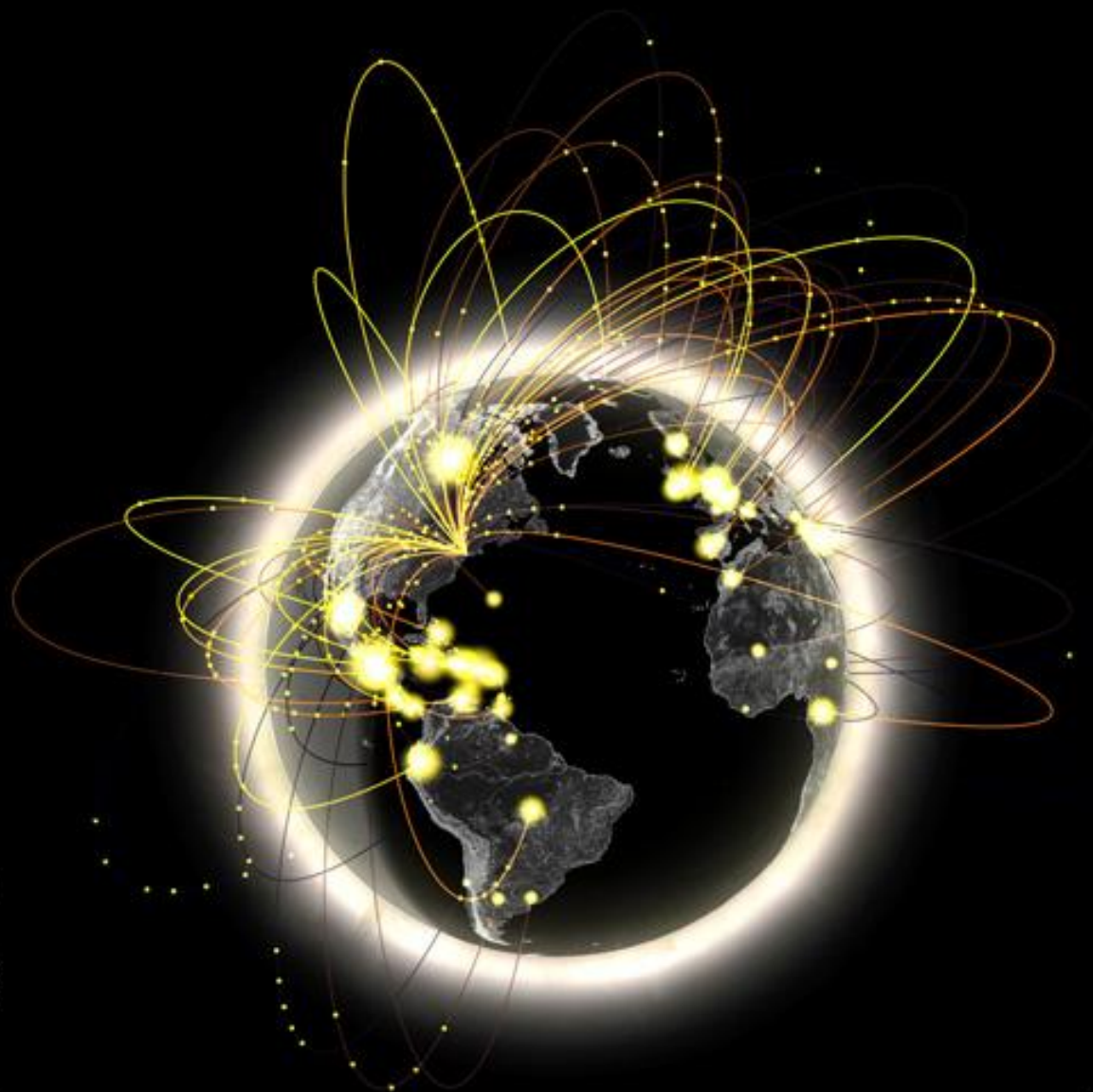


Internet Usage Analysis of Personal Computers

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2010A7PS193G
2013H112045G

Software Engineering and Management



Globe Encounters

In the Information Age, the flow of Internet traffic between locations is nearly ubiquitous. Globe Encounters visualizes the volumes of Internet data flowing between New York and cities around the world over the past 24 hours. The size of the glow on a particular city location corresponds to the amount of IP traffic flowing between that place and New York City. A larger glow implies a greater IP flow.

IP traffic | total
outgoing from new york



Objective

Why packet analysis ?

1. Understanding network characteristics
2. Learning who is on a network
3. Determining who or what is utilizing available bandwidth
4. Identifying peak network usage times
5. Identifying possible attacks or malicious activity
6. Finding unsecured and bloated applications

Scope

Employee Monitoring

Web Usage Tracking

At School

At home

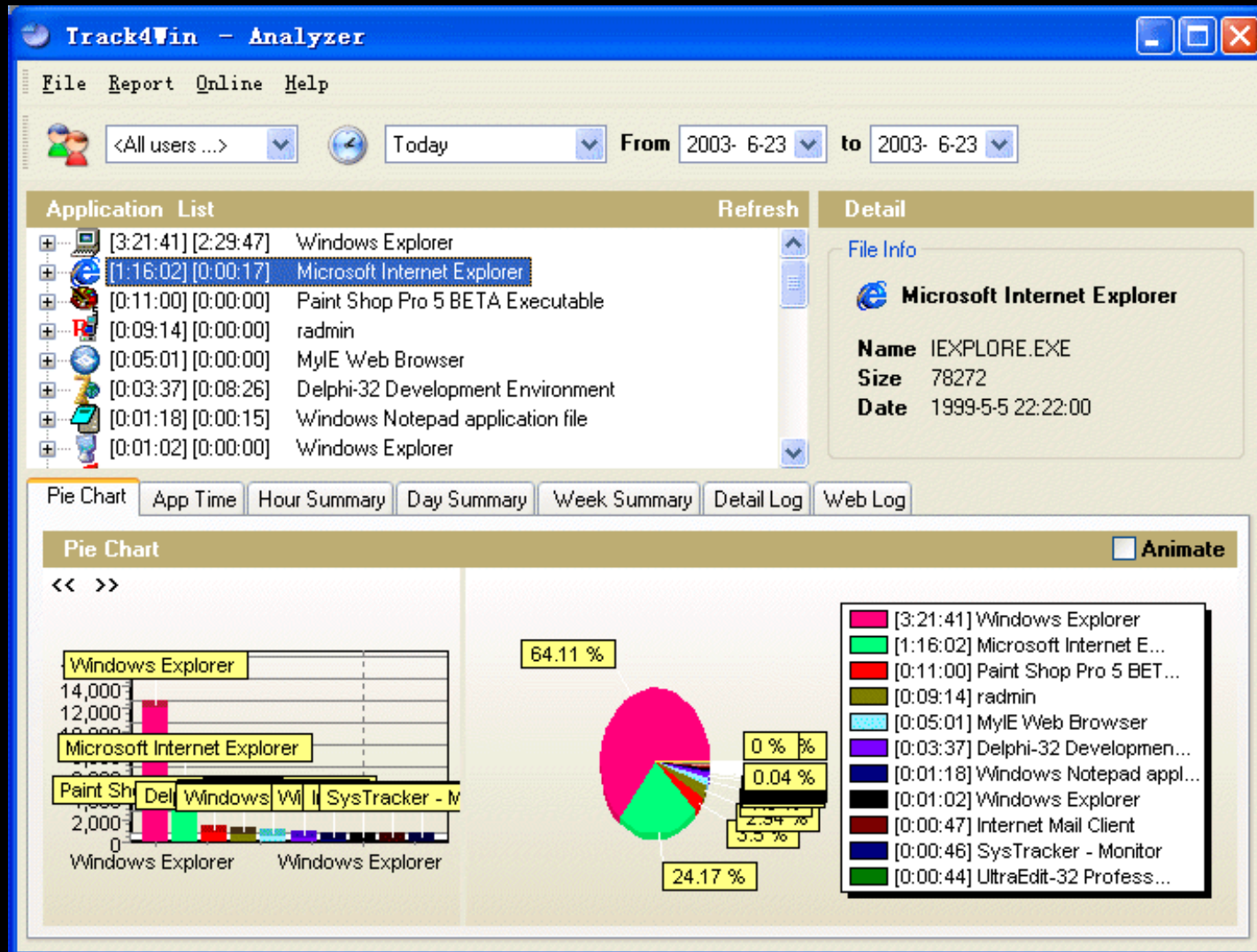
Internet cafe

Literature Survey

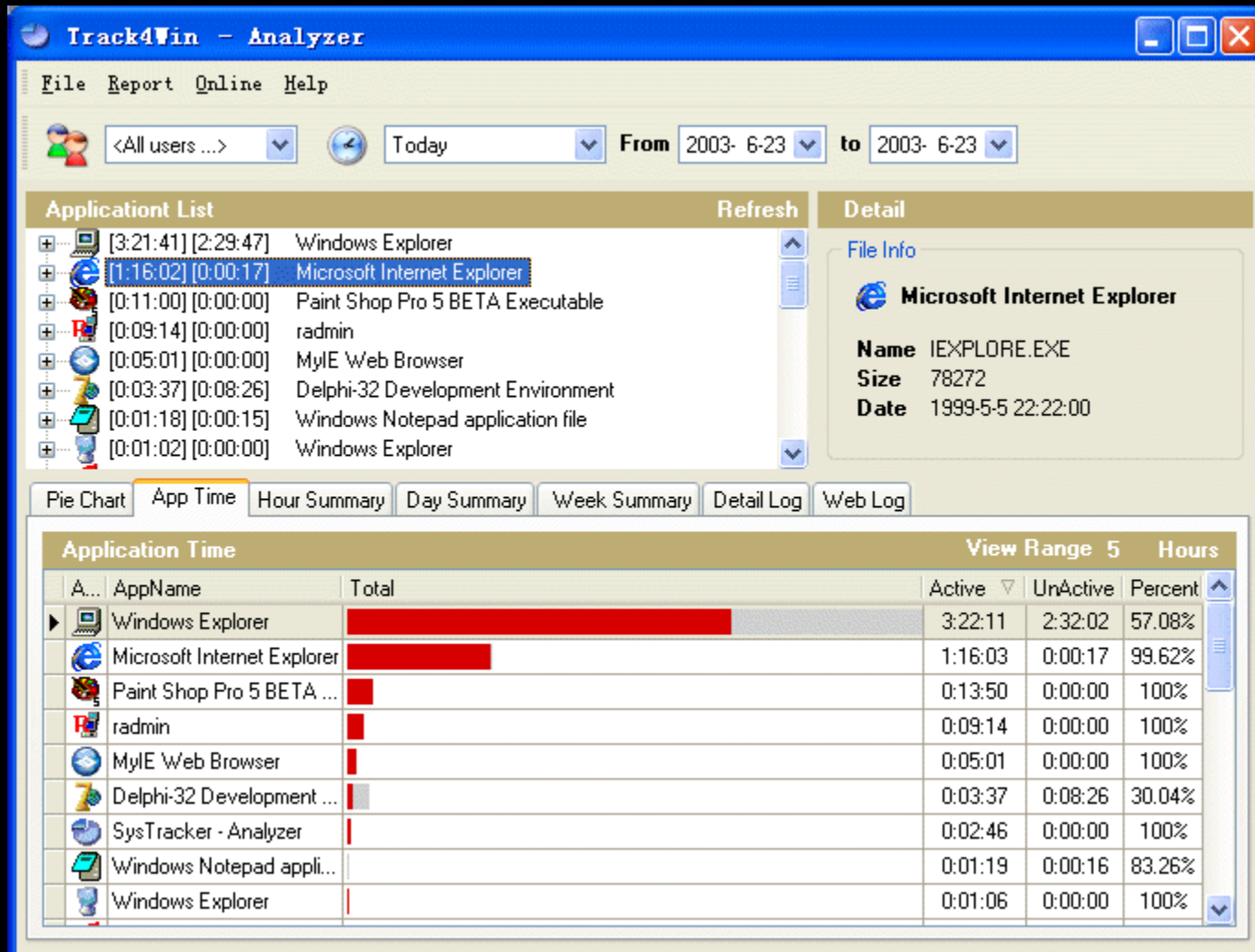
Track4Win

- Monitor all computer users simultaneously.
- Single PC tracking or networked computers monitoring
- Real-time PC monitoring and Internet usage tracking
- Screen capture from remote computers
- Browser history tracking
- Remote deployment/installation for Monitor program
- Support MS Access, MS SQL, MSDE, Oracle and ODBC
- Abundant reports, ease of use, small size, fast running speed, and good interface

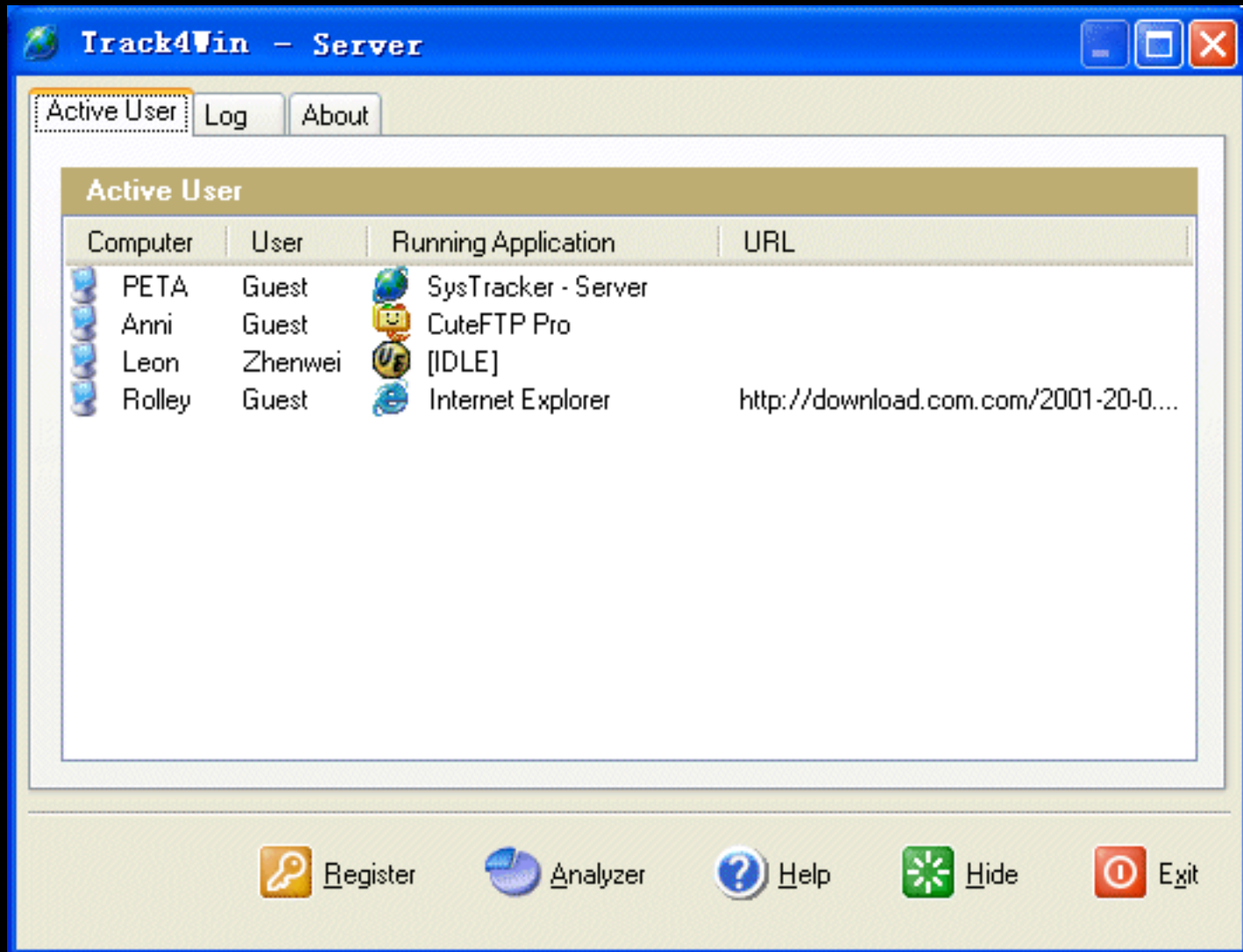
Time analysis charts



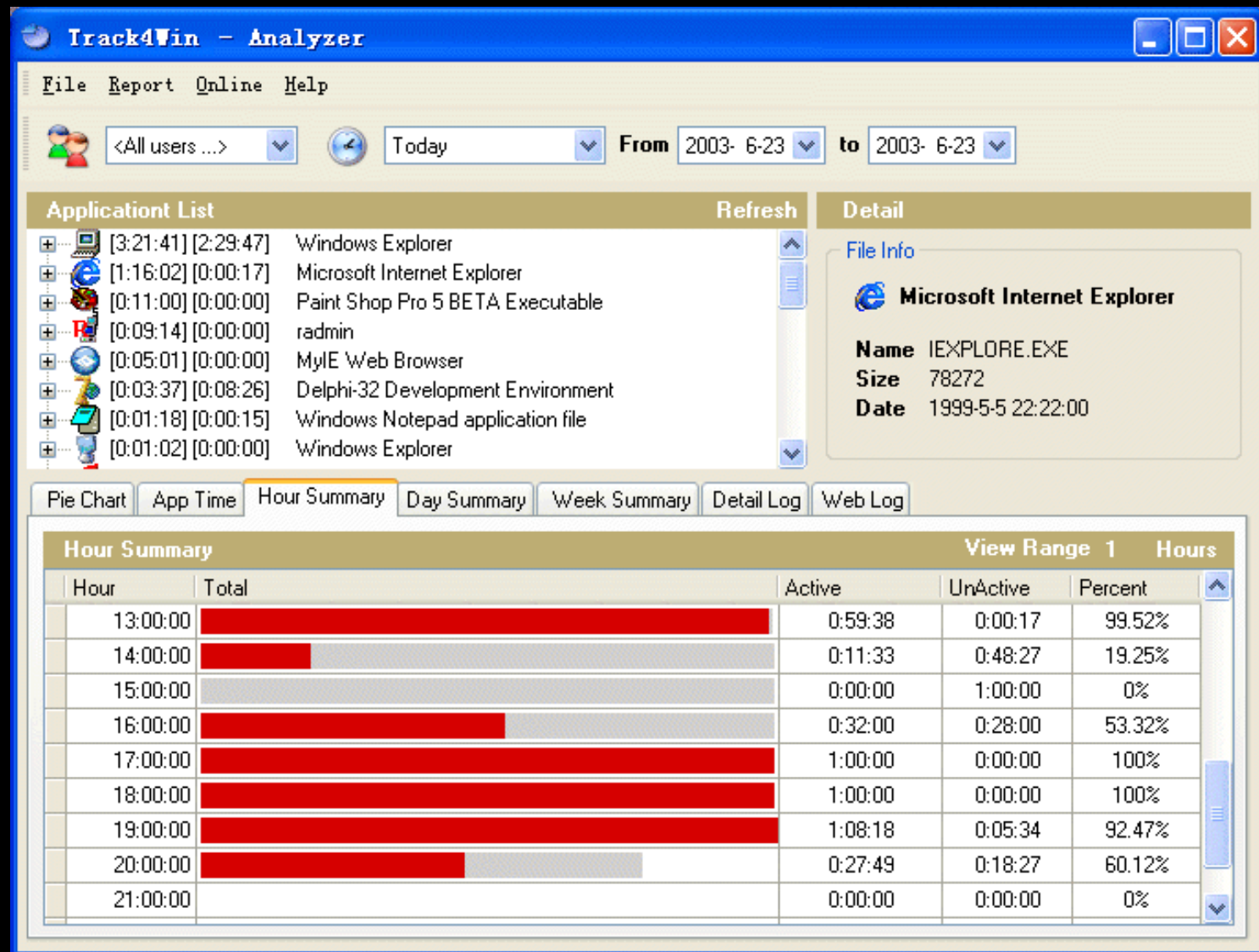
Active and Inactive Time



Multi-user Real Time Monitor



Summary Report



Other softwares

SpyAgent

WebWatcher

PC Pandora

Spector Pro

eBlaster

Elite Keylogger

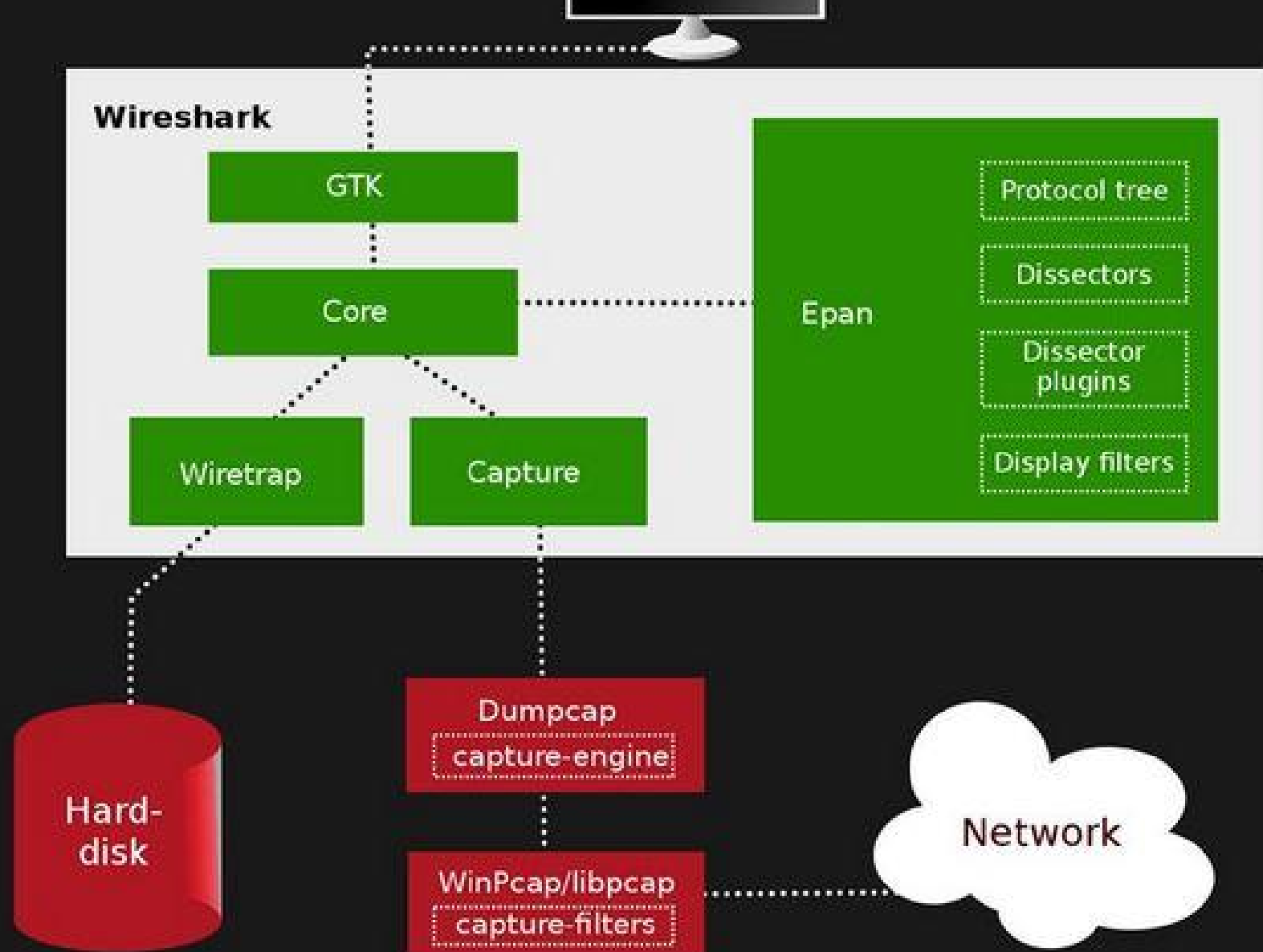
SniperSpy

InterGuard

Wireshark

- Available for **UNIX** , **Windows** , **Mac**
- **Capture** live packet data from a network interface
- **Open** files containing packet data captured with tcpdump/WinDump Wireshark, and a number of other packet capture programs
- **Import** packets from text files containing hex dumps of packet data
- Display packets with **very detailed protocol information**
- **Save** packet data captured
- **Export** some or all packets in a number of capture file formats
- **Filter packets** on many criteria
- **Search** for packets on many criteria
- **Colorize** packet display based on filters
- Create various **statistics**

Wireshark - Block Diagram



Advantages of Wireshark

- 1. Supported Protocols**
- 2. User friendliness**
- 3. Cost**
- 4. Program Support**
- 5. Operating System Support**

Development Tools

- Sniffer

 - LIBPCAP** - packet capture library

- Database

 - MySQL** - Relational Database Management System

- Statistical Analysis

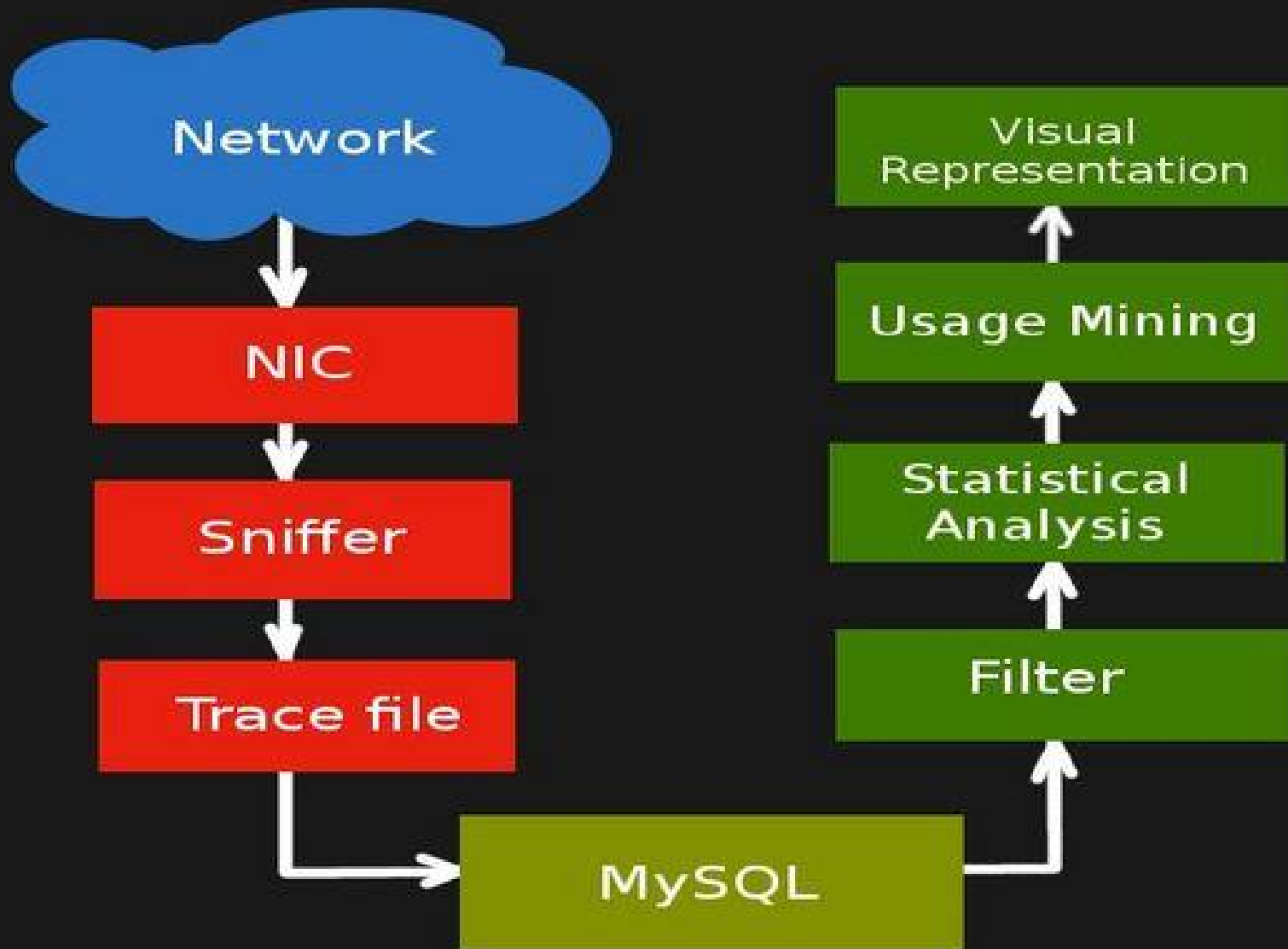
 - R** - Statistical Computing and Graphics

New Features

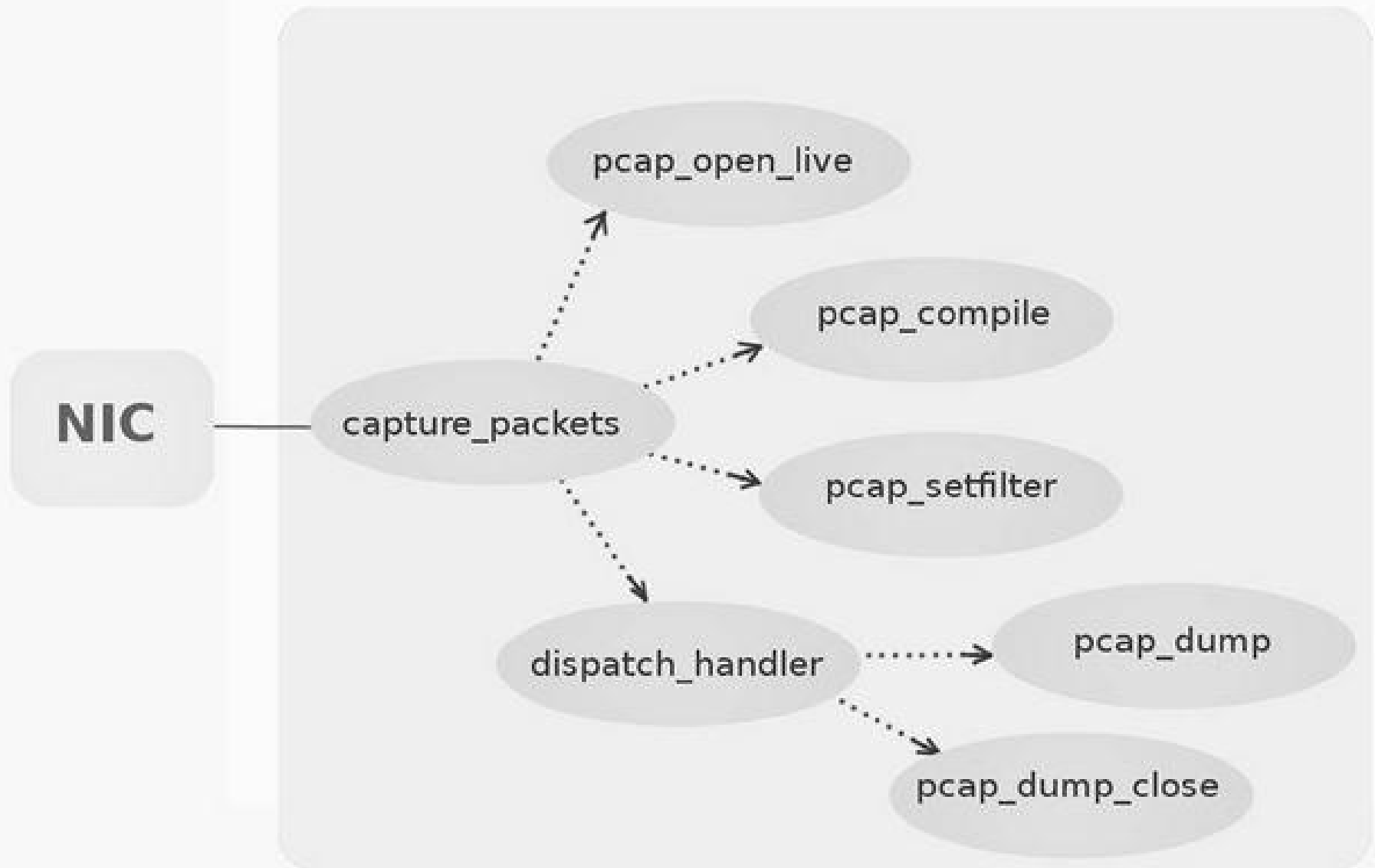
- Preventing : downloading, installation and use of illegally obtained software and music
- Alert : spurious conversations via chat and instant messaging clients
- Vulnerabilities : viruses , malicious software , unusual activities
- Block : keyword updates integrated into the system
- Remote control : disable or enable software, restart the computer , update keywords to block
- Throughput : different protocols e.g. TCP , UDP, IPV4
- Reporting methods : easy to navigate , multiple report features, perform custom searches

- No server web-log analysis . Client side software
- Extracting patterns from network traffic analysis
- Clustering of websites according to content
- Get analysis on peak times for browsing
- Updates on bandwidth usage
- Recommend websites to users based on web usage ,
page content , time of browsing
- Lighter on the system
- Efficient use of system resources

Block Diagram



Use Case Diagram



THANK YOU !