Market study of Eclipse in Japan from "Extensive research of development assistance tools" by NIKKEI SYSTEMS

19 September, 2007
Motoki MORI
NEC Soft Ltd.

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1. Introduction of NEC

1.1 NEC Group Profile

NEC Corporation and Consolidated Subsidiaries: 342

- As of Mar. 31 2007 -

Net Sales: ¥4,652.6 billion
- Fiscal year ended Mar. 31 2007 -

Employees: 154,786
- As of Mar. 31 2007 -

Major Operations
of the NEC Group:
  IT/Network Solutions Business
  Mobile/Personal Solutions Business
  Electron Devices Business
    (Semiconductor Solutions, Electronic
    Components, and other products)

NEC Corporation in brief
  Established : 1899
  Chairman of the Board: Hajime Sasaki
        President: Kaoru Yano

Financial results are based on accounting principles generally accepted in Japan.

■Company Name: NEC Soft, Ltd.

■Date of Establishment: September 9, 1975
■Capital: ¥8.668 billion
■President: Norihiko Kunishima
■Employees: 5,464 (Consolidated Basis, as of March 31, 2007)
4,652 (Non-Consolidated Basis, as of March 31, 2007)
■Head Office:1-18-7 Shinkiba, Koto-ku, Tokyo,136-8627 Japan
■Homepage: http://www.necsoft.com/

■Areas of Business:
– Consulting, systems integration,
– program packages, education (training),
– business systems development,
– systems operation support,
– basic software and general-purpose
– application package development,
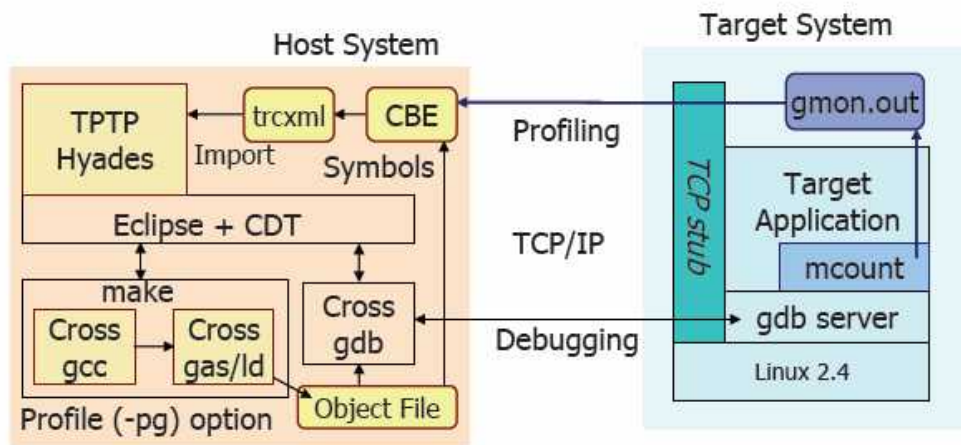– application service provider (ASP)

■Shareholder: NEC Corporation

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Embedded systems debugging and profiling
using CDT and TPTP-based environment

Remote Profiling Architecture

- Remote debugging with gdb server
- Remote profiling with TCP stub and TPTP

Kouhei Nadehara & Yuichi Nakamura (NEC)
http://www.eclipsecon.org/2007/index.php?page=sub/&id=4107

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Rapid developing a Rich Client/Server Application based RCP (JALCEDO)

Database Table Manipulation plug-ins for DTP

Kazumi Ohgata (NEC Soft, Ltd.)
http://www.eclipsecon.org/2007/index.php?page=sub/&id=4043

Takehiro Hosokawa (NEC Soft, Ltd.)
http://www.eclipsecon.org/2007/index.php?page=sub/&id=3970

2. Outline of the research

■NIKKEI BP
  – is a one of the most famous business-IT publisher in Japan
  – has a lot of magazines.
  – This research was reported on "NIKKEI SYSTEMS Jun,2007."

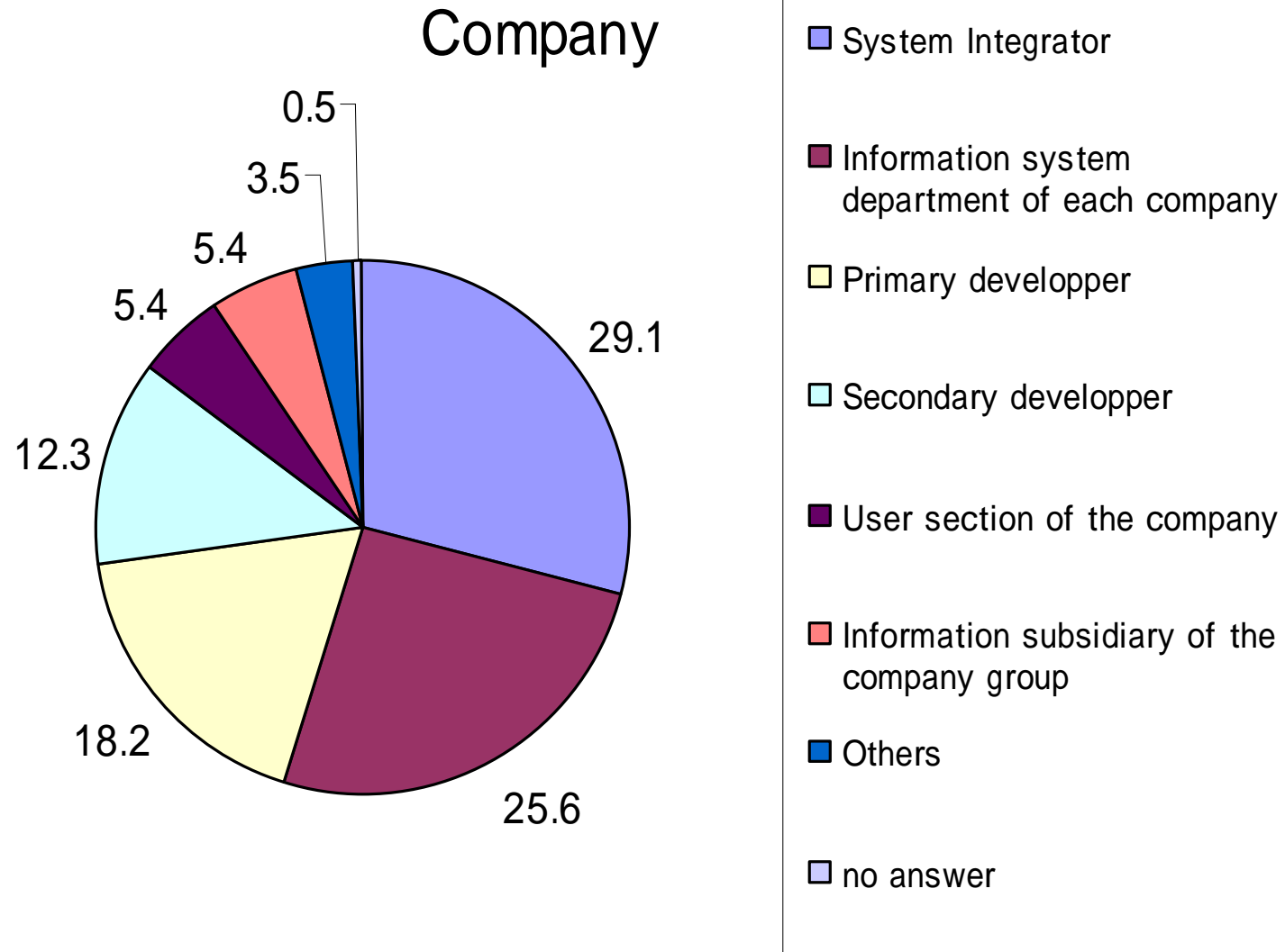■Researched and reported
 by Takashi NISHIMURA of NIKKEI BP

■Market research on the internet
  – From March 9th to April 16th 2007 in Japan
  – The number of respondents was 1731

■About programming tool
  – The number of respondents 770
  – Totally, Eclipse wins against Visual Studio

Company

0.5
3.5
5.4
5.4
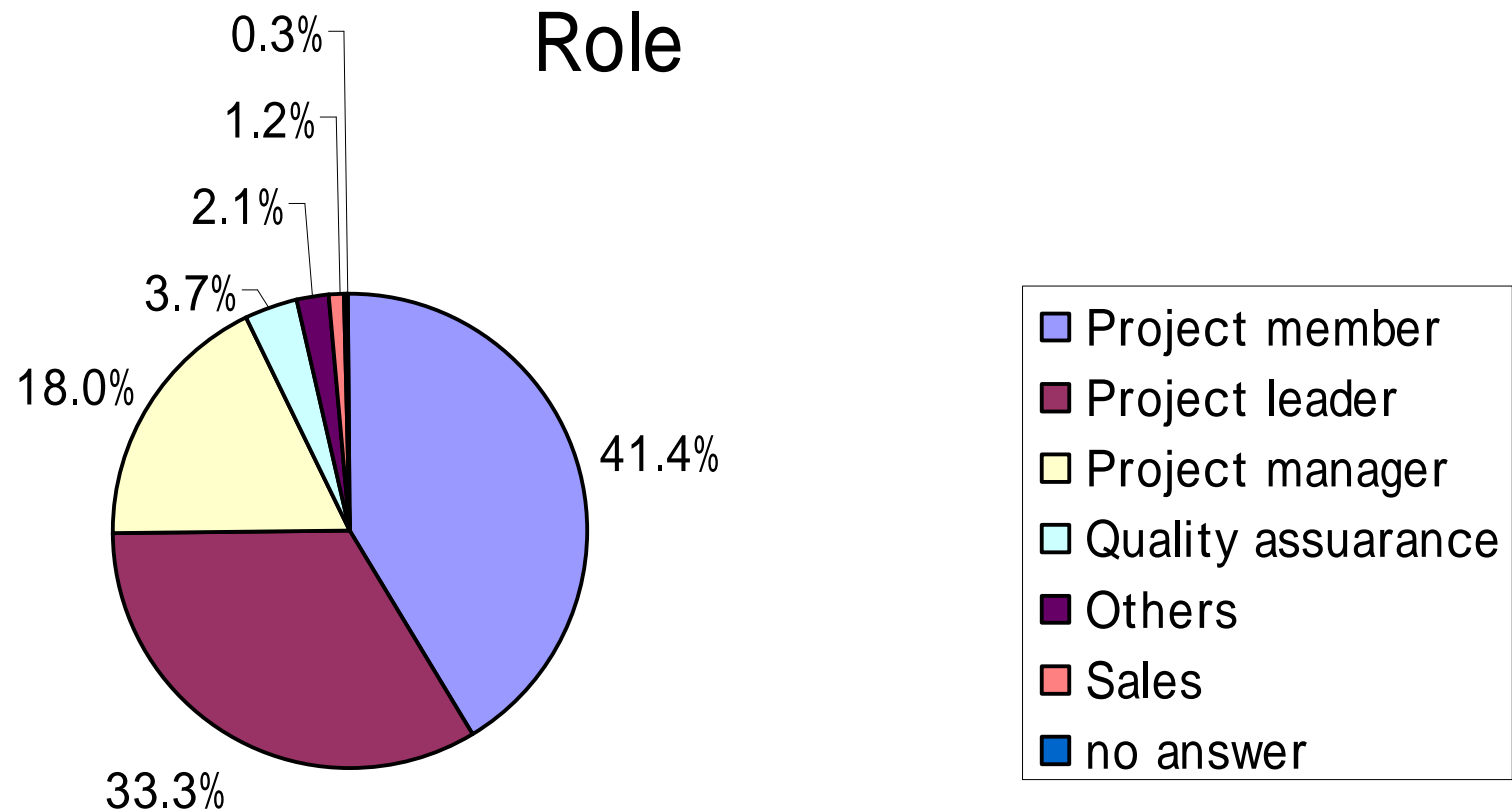12.3
18.2
29.1
25.6

- □ System Integrator
- ■ Information system department of each company
- □ Primary developper
- □ Secondary developper
- ■ User section of the company
- ■ Information subsidiary of the company group
- ■ Others
- □ no answer

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Role

0.3%

1.2%

2.1%

3.7%

18.0%

41.4%

33.3%

Legend:
- Project member
- Project leader
- Project manager
- Quality assuarance
- Others
- Sales
- no answer

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Project size

< $85K

11.7%

25.2%

28.9%

$850K <

34.2%

- ☐ Less than 10M Yen
- ☐ 10M < < 100M Yen
- ☐ Over 100M Yen
- ☐ Don't know

Target system

0.9%

4.9%

7.7%

8.9%

40.9%

36.7%

- Web Application
- Client-Server Application
- MainFrame or Office computer
- Standalone application
- Others
- No answer

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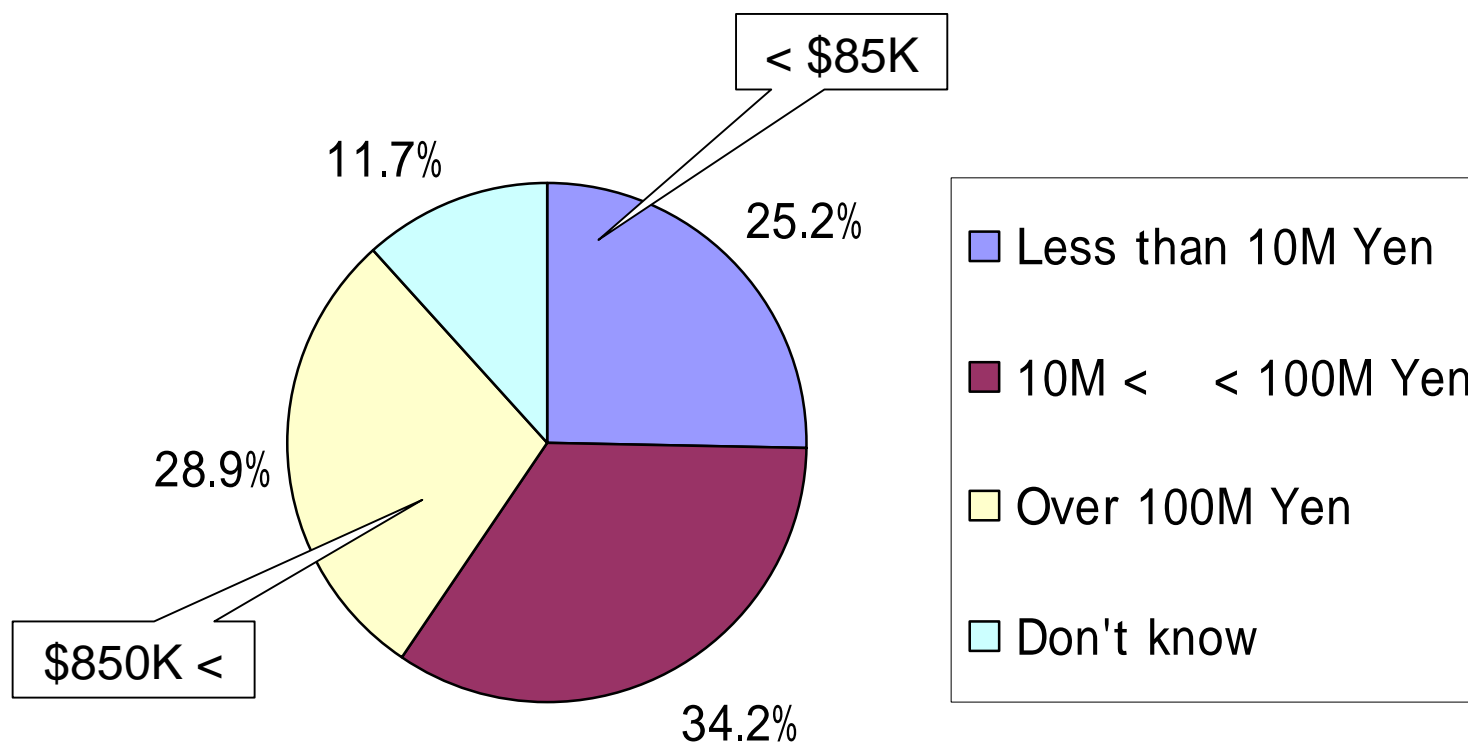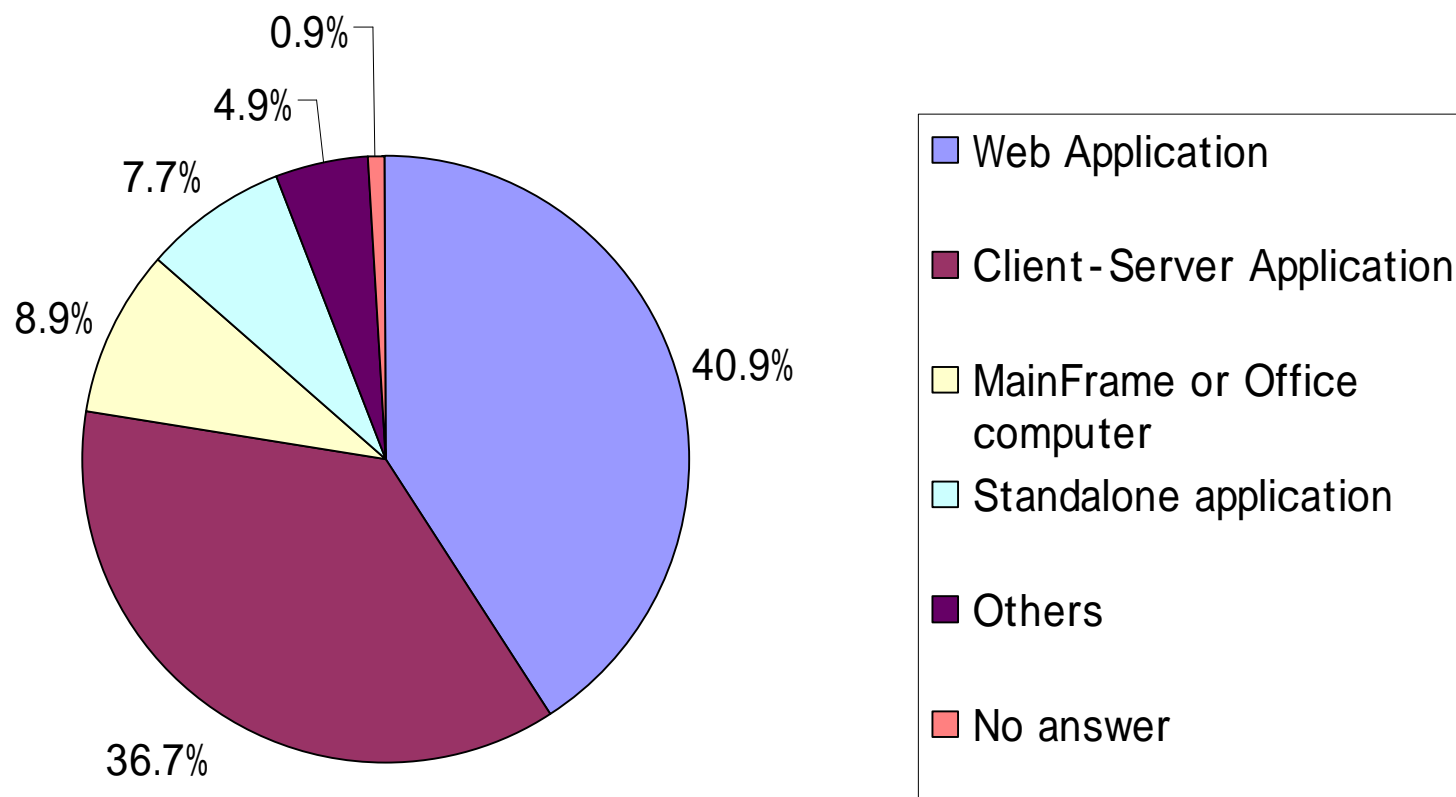
Usage of assistance tool

Programming	73.1
Version Control	45.3
Project Management	35.4
Stress Test	33.1
Vulnerability test for Web	28.5
Unit test	28
Measurement test	25.8
Analysis/Desgin	23.2
Functional Test	15.2
Requirement	12.1
Average of total	31.5

0   10   20   30   40   50   60   70   80

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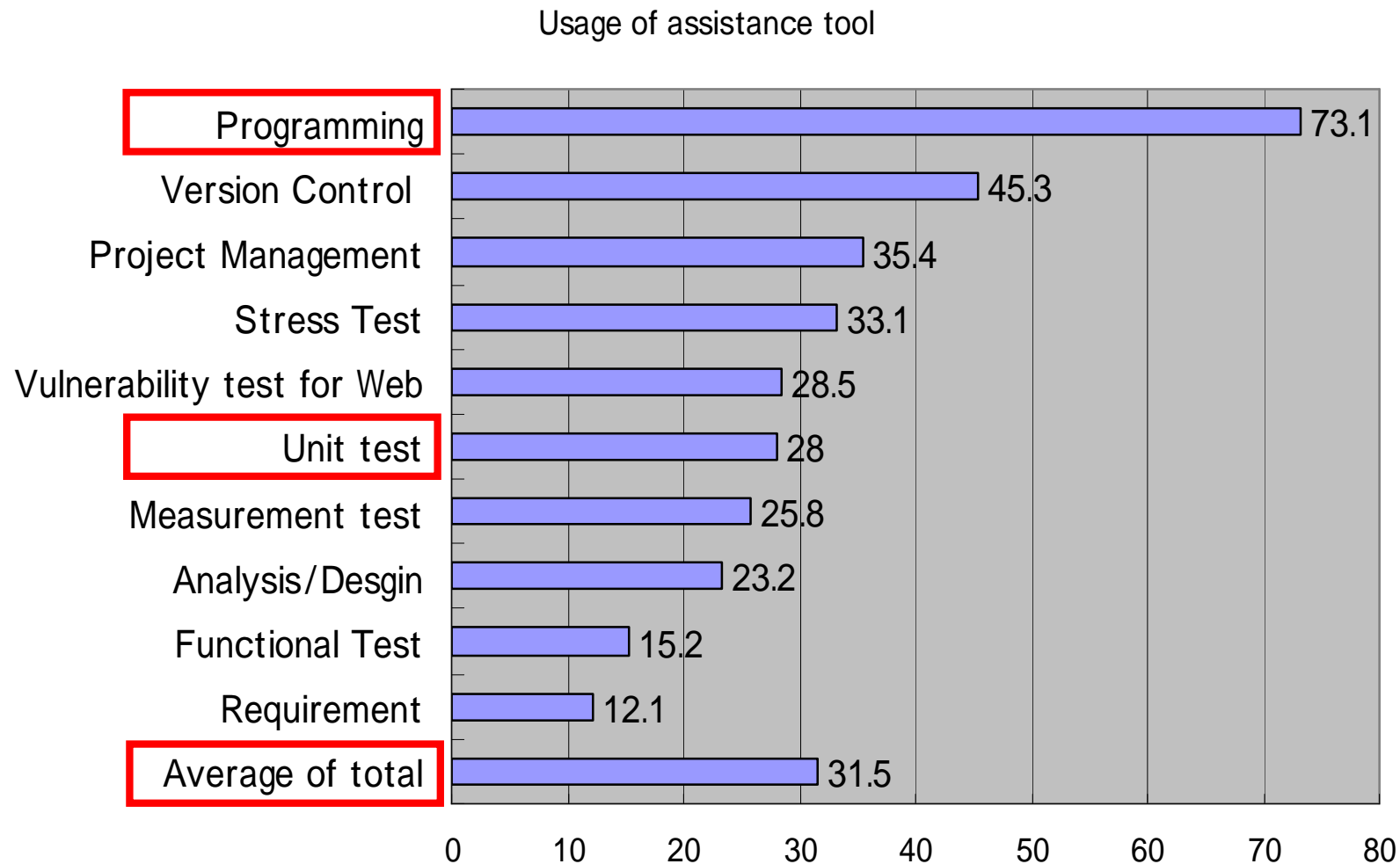
No clear reason

Reason of not use

Reason	Value
No answer	1.2
Hard to say	7.4
Others	13.4
Can't find enough functions	3.8
Support is not enough	5.5
Dificultiness of getting information from Web	12
Cost for operation	12
Lack of engineer	21.1
Cost for adoption	23.8
Few achievement of adoption	24.7
Can't expect the effect	34.7

Maximum 35%

0   5   10   15   20   25   30   35   40

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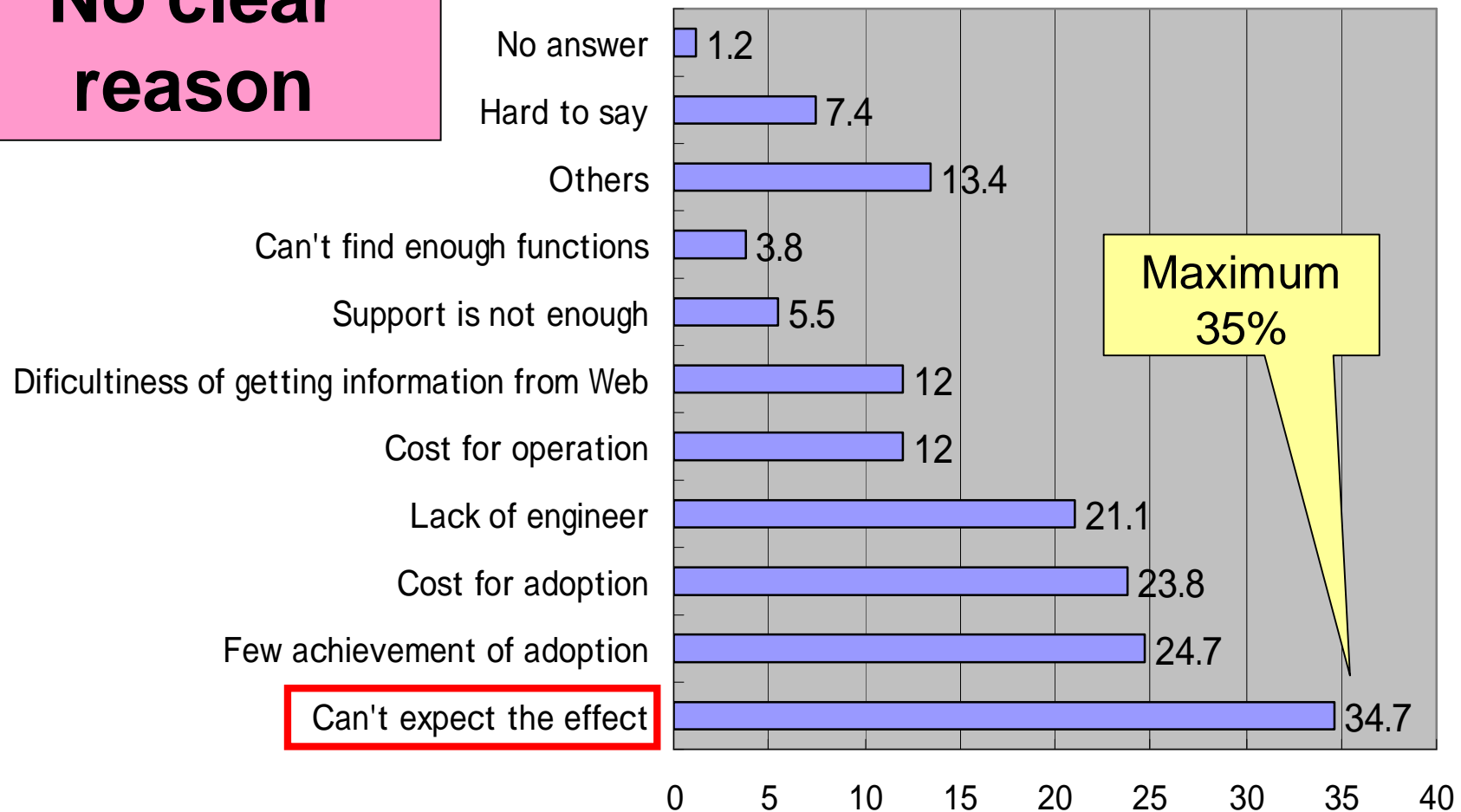
3. Programming Tools

Mainly comparison
Visual Studio and Eclipse

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Others
20.8%

Oracle Jdeeloper
1.6%

no answer
0.6%

Microsoft Visual
Studio
(including
Express edtion)
38.3%

Boland
Developer Studio
1.6%

IBM Rational
Application
Developer
3.8%

Eclipse
28.2%

Proprietary tools
5.1%
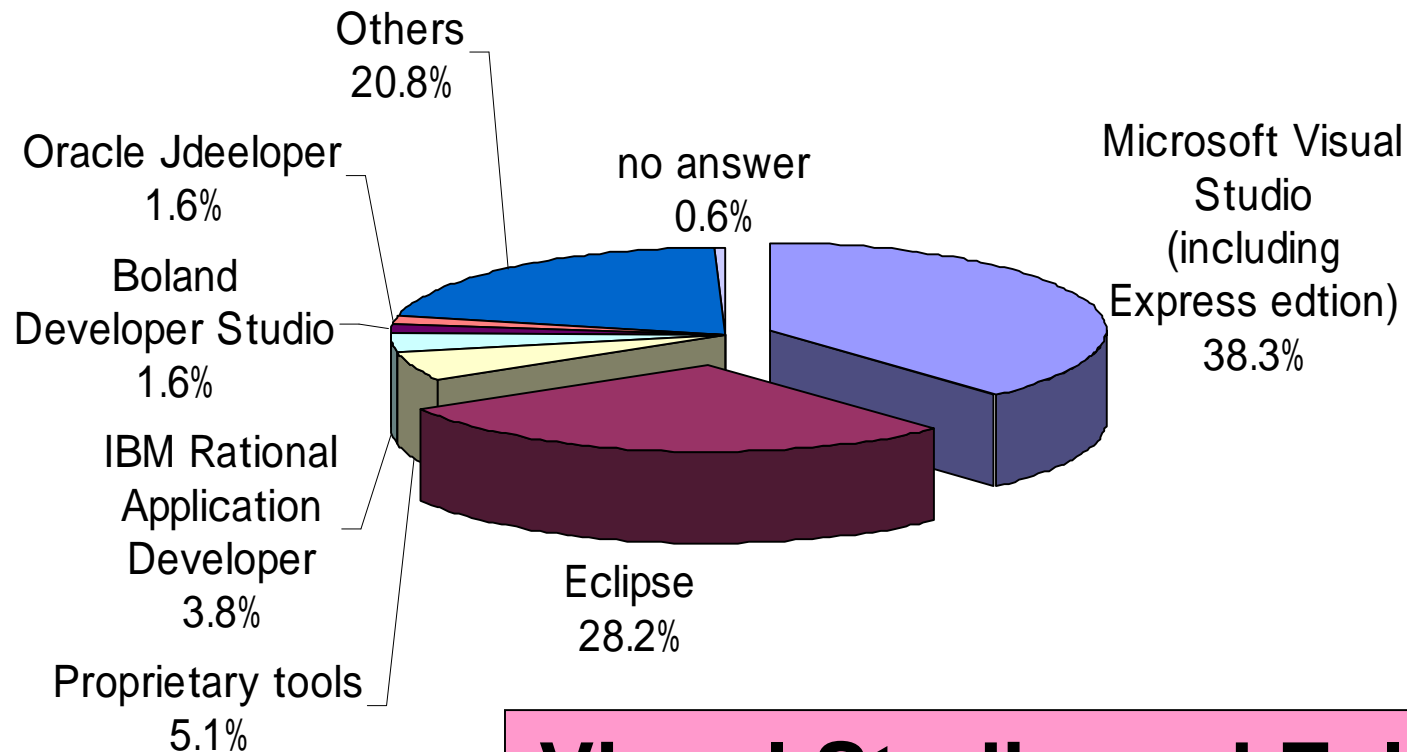
Visual Studio and Eclipse are 2 big names

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< $85K

Details of Project size

Eclipse for big

	Small (< 10Myen)	Mediam (10M< <100Myen)	Large (> 100Myen)	no answer
Eclipse	21.2	31.8	33.2	13.8
VS	33.2	37.6	17.3	11.9

0%   10%   20%   30%   40%   50%   60%   70%   80%   0%   100%

□ Small (< 10Myen) ■ Mediam (10M< <100Myen) □ Large (> 100Myen) □ no answer

$850K <

Visual Studio is major in SMB

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VB more 50%

Almost Java

Visual Studio

1.4%
1.0%
19.0%
53.2%
25.4%
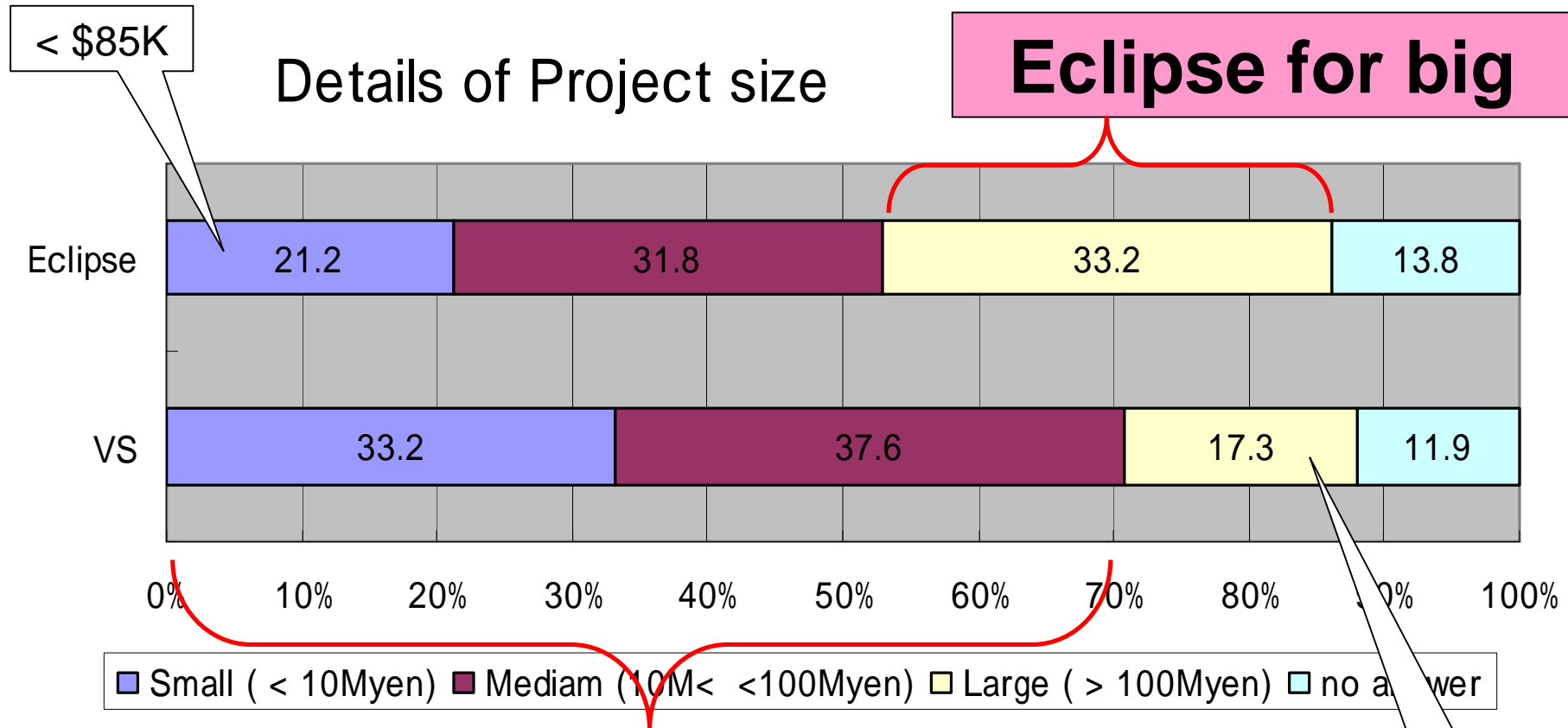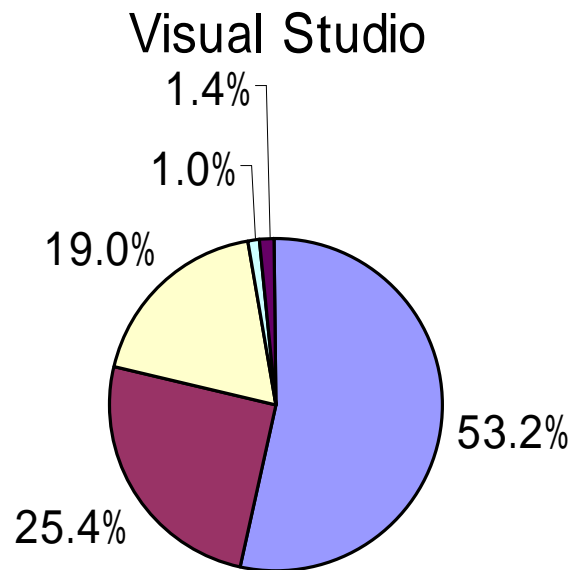
☐ Visual Basic ■ C/C++ ☐ C# ☐ Java ■ Others

Eclipse

3.7% 1.2% 0.0% 0.4%
7.4%
86.2%
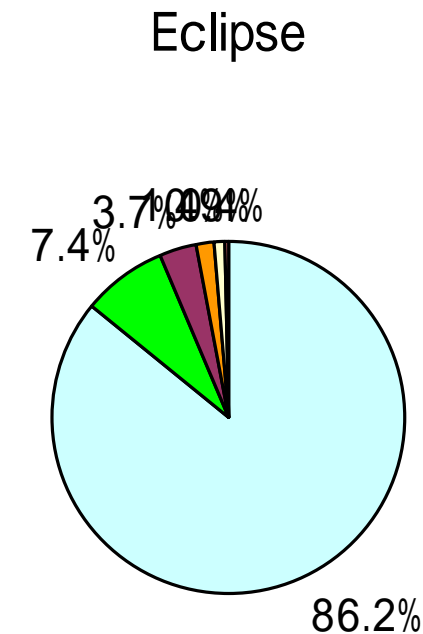
☐ Java ■ PHP ■ C/C++ ■ Python ☐ C# ■ Others

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Eclipse not only by price but also by function and usability

Reason of adoption

	Eclipse	Visual Studio
Price	16.1	1.4
Functions	23.5	19.7
Easy to get	6	6.8
Usability	24	16.6
Designated by Project	20.3	43
Others	2.8	7.8
no answer	1.8	2

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

☐ Price ■ Functions ☐ Easy to get ☐ Usability ■ Designated by Project ☐ Others ■ no answer
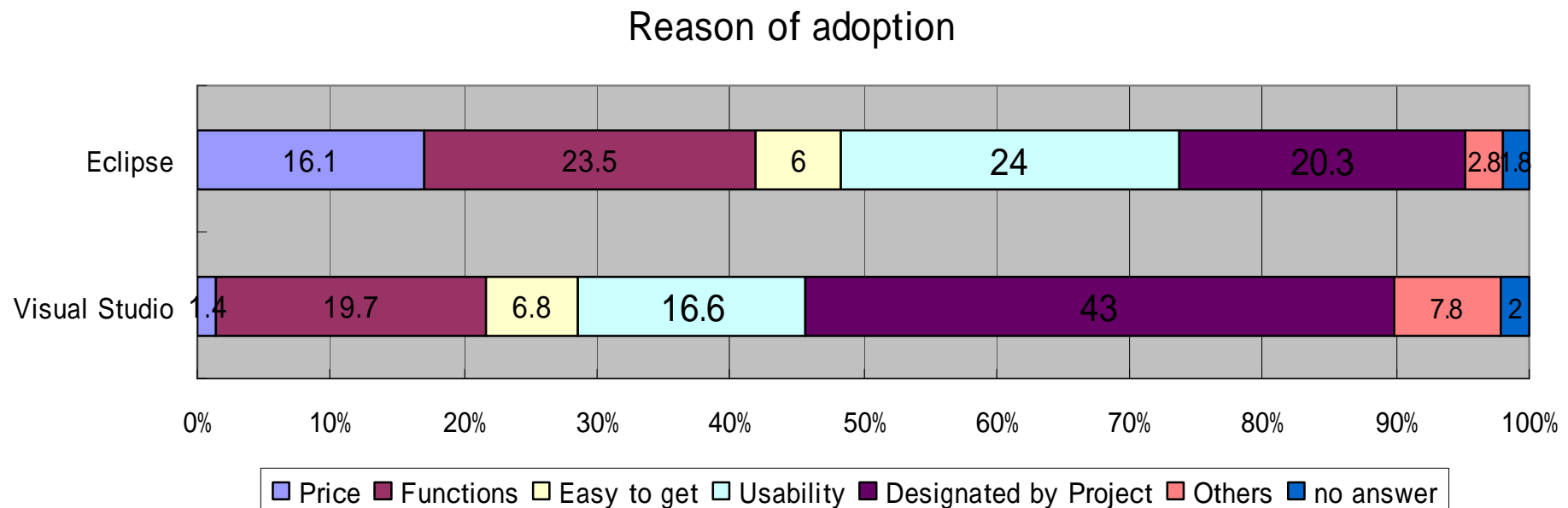
Visual Studio as "designated tool"

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Opinion

Category	VisualStudio	Eclipse
Effective for improving quality	62.3	77.6
Effective for improving efficiency	70.4	84.7
Easy to get information from Web	79.2	83.1
Support scheme	51.6	35.3
Usability	67.2	78.1
Enough functions	67.8	81.9
High stability	63.4	73
Low cost to get and use it	45.8	88.8
Quick start to launch	66.2	68.4
Easy installation and configuration	71.1	70.5

☐ VisualStudio ■ Eclipse
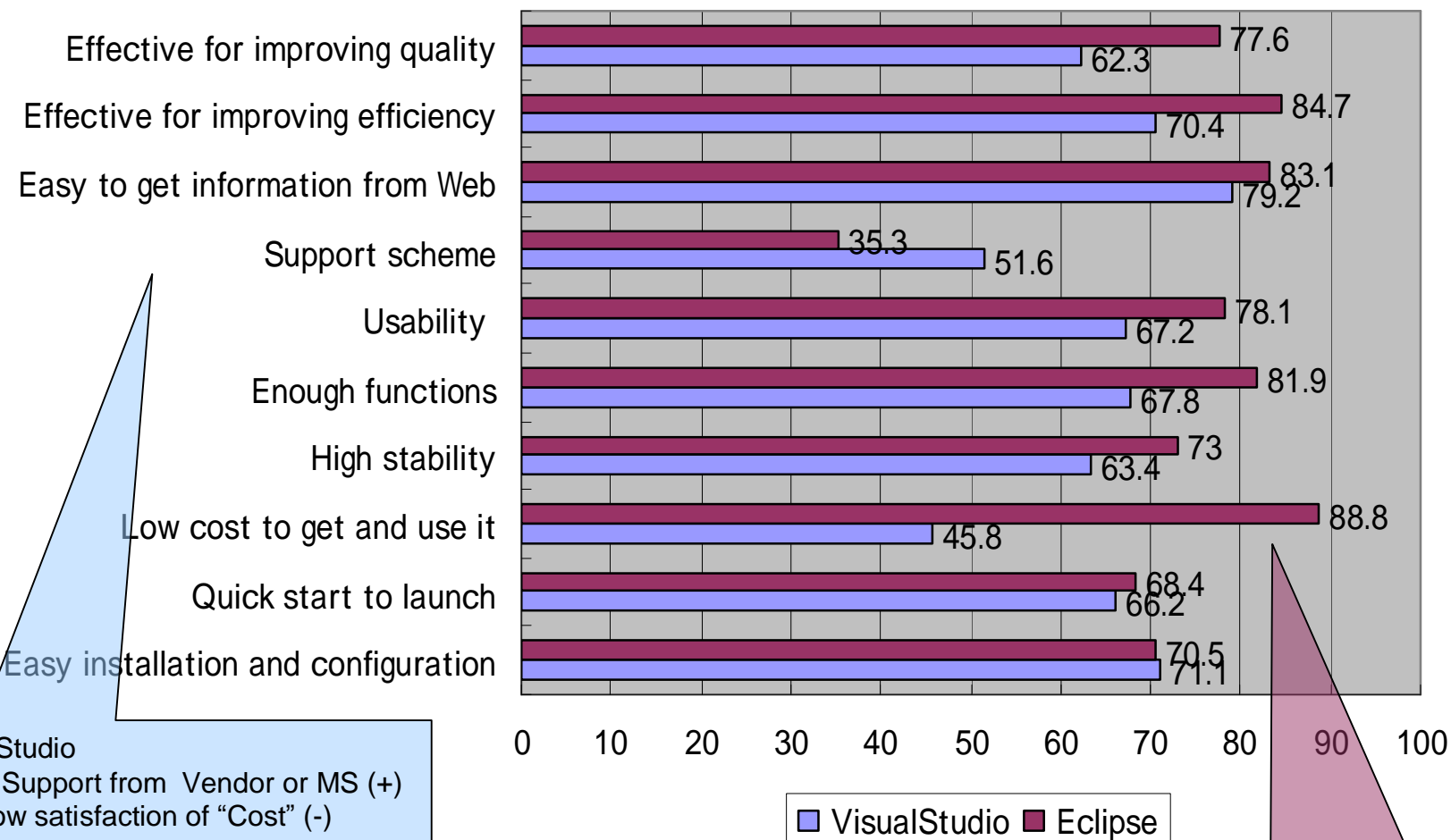
Visual Studio
Better Support from Vendor or MS (+)
Very low satisfaction of "Cost" (-)

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Eclipse
High satisfaction of "cost" (+)
Improvement of working efficiency (+)

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Visual Studio

- ■Easy to manage versions. With resource sharing, convenient for development in team (VS2005)
- ■All-in-one environment on a local machine (VS2005)
- ■Useful interface expansion when class inheritance (VS.NET2003)
- ■Quick launch, rich functions for assistance (VS2005)

Eclipse

- ■Asset management by CVS is useful.(Eclipse3.1)
- ■WTP is useful for Web development (Eclipse3.2)
- ■Refactoring, filling gap function for coding, templates should be used. (Eclipse3.1)
- ■Fullfil plug-ins, and customizable for each project (Eclipse3.1)

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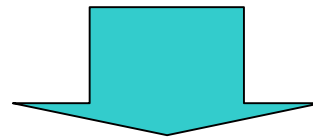| Visual Studio	Eclipse
■High spec hardware required (VS6.0) ■Lack of grid, form, scroll of the display (VS 6.0) ■Help is not enough easy to use (VS2005) ■The more functions, the more anxious thought of wrong use. (VS6.0)	■Working speed is not partly acceptable.(Eclipse3.0) ■Lack of upper process support functions (Eclipse3.1) ■Too much plug-ins, hard to choose them. (Eclipse3.2) ■Due to many functions, configuration is complex. Hard to identify what I should do.(Eclipse3.1)

High spec hardware required
Too much functions
Lack of functions for developing GUI

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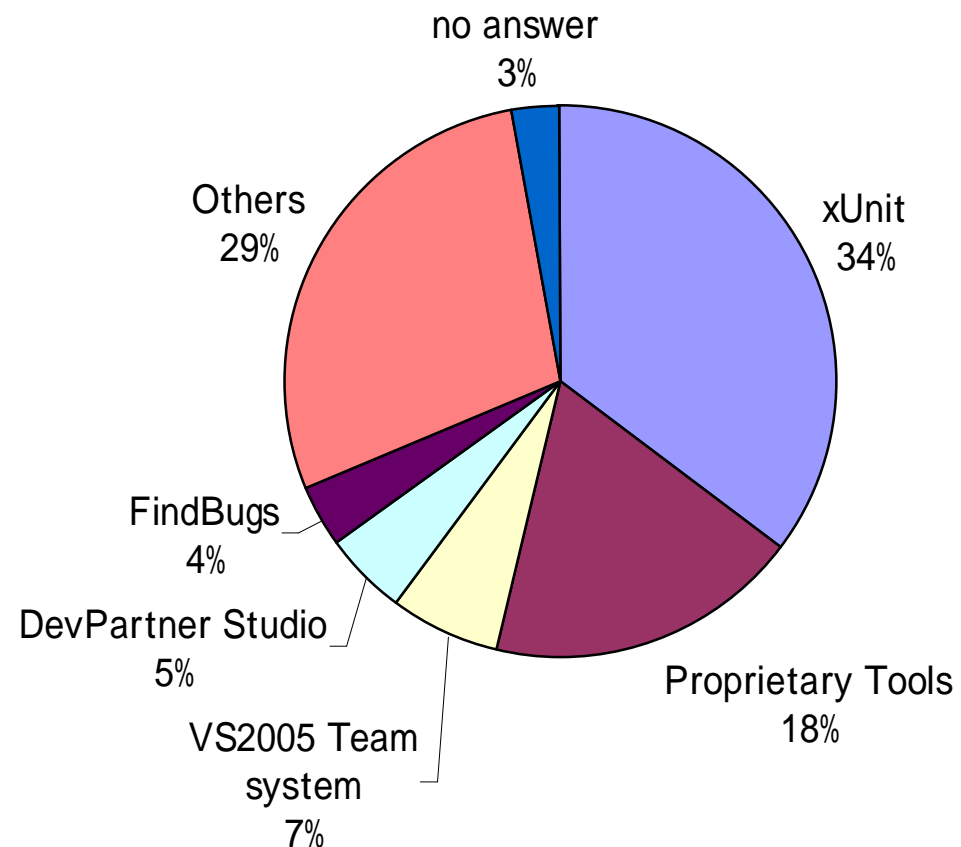Eclipse won or got same level to Visual Studio except "support scheme".

■There are many negative comments in common between Visual Studio and Eclipse.

■ Why does Eclipse get better satisfaction?

It comes from the difference of "reason of adoption"

4. Tools for unit test

no answer
3%

Others
29%

xUnit
34%

FindBugs
4%

DevPartner Studio
5%

VS2005 Team
system
7%

Proprietary Tools
18%

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by VS users

Legend	
☐	xUnit
☐	VS2005 Team system
☐	Proprietary Tools
☐	DevPartner Studio
☐	DevPartner for VisualC++ BoundsChecker suite
☐	FindBugs
☐	CheckStyle
☐	Parasoft J test
☐	Others
☐	No answer

by Eclipse users

by VS users chart:
2.7%
0.0%
0.0%
0.0%
12.3%
23.3%
6.9%
21.9%
15.1%
17.8%

by Eclipse users chart:
8.5%
1.1%
2.2%
7.5%
9.7%
0.0%
0.0%
2.2%
0.0%
68.8%
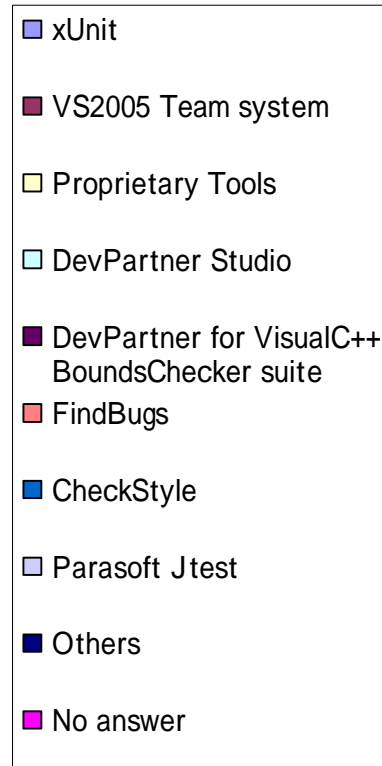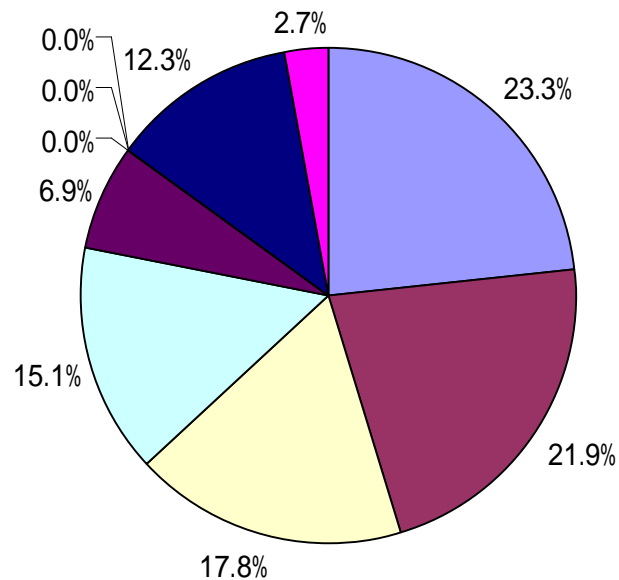
Eclipse users tend to use OSS

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5. Appendix

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change/version control

Pie chart labels:
- 0.0%
- 30.0%
- 30.0%
- 11.0%
- 9.2%
- 5.9%
- 13.9%
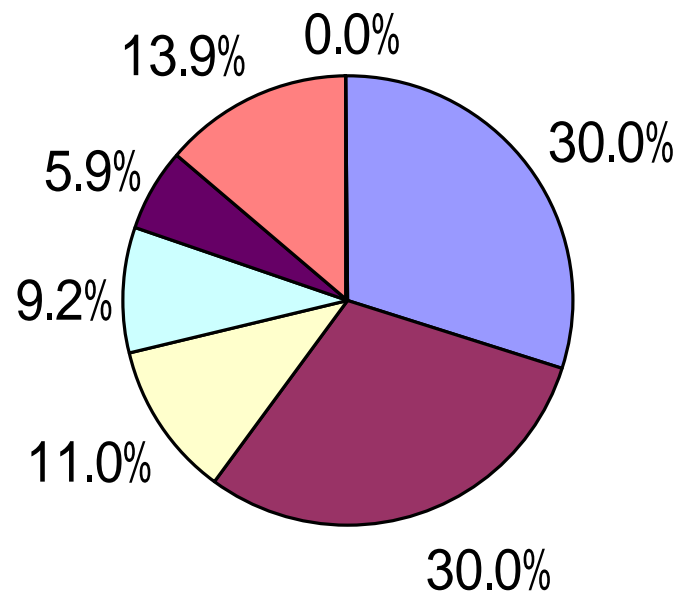
Legend:
- CVS
- Mcosoft Visual SourceSafe
- Subversion
- Proprietary Tools
- TortoiseSVN
- Others
- no answer

by VS users

0.0%
7.4%
0.0%
6.0%
0.0%
3.0%
7.5%
76.1%

☐	CVS
■	Mcosoft Visual SourceSafe
☐	Subversion
☐	Proprietary Tools
■	TortoiseSVN
■	Subsclipse
■	Others
☐	No answer

by Eclipse users

7.7%
0.0%
5.2%
10.4%
0.0%
49.4%
18.2%
9.1%
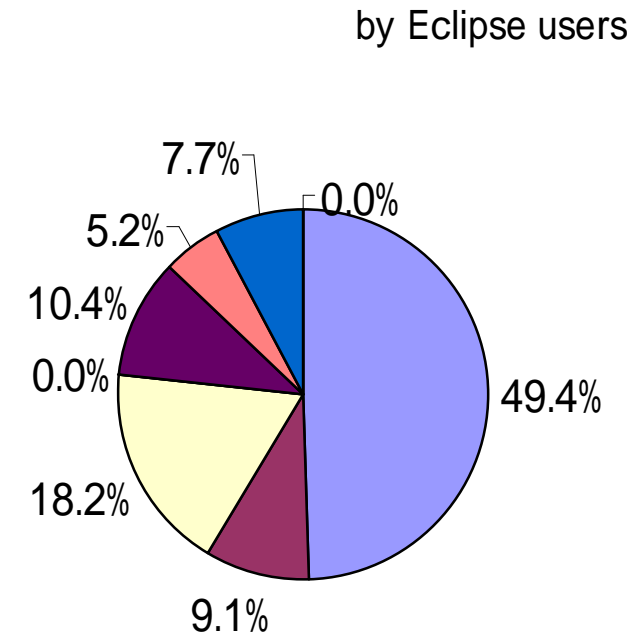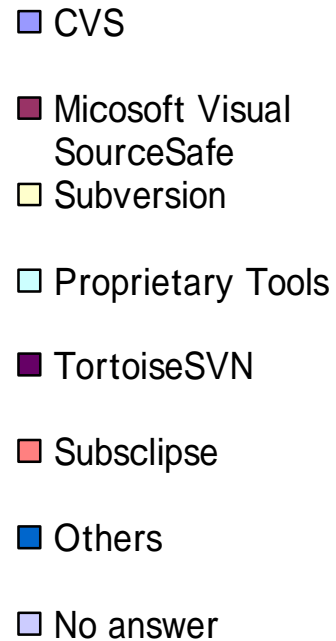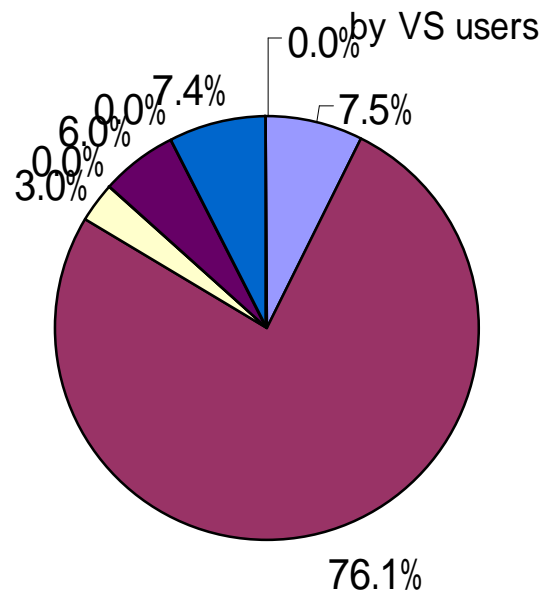
The difference sticks out

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Analysis and Design tools

1.4%
22.6%
36.2%
15.1%
4.5%
6.2%
14.0%

- ☐ Mcrosoft Office Visio
- ☐ JUDE
- ☐ Proprietary tools
- ☐ Enterprise Architect
- ☐ SI Object Browser ER
- ☐ Others
- ☐ no answer
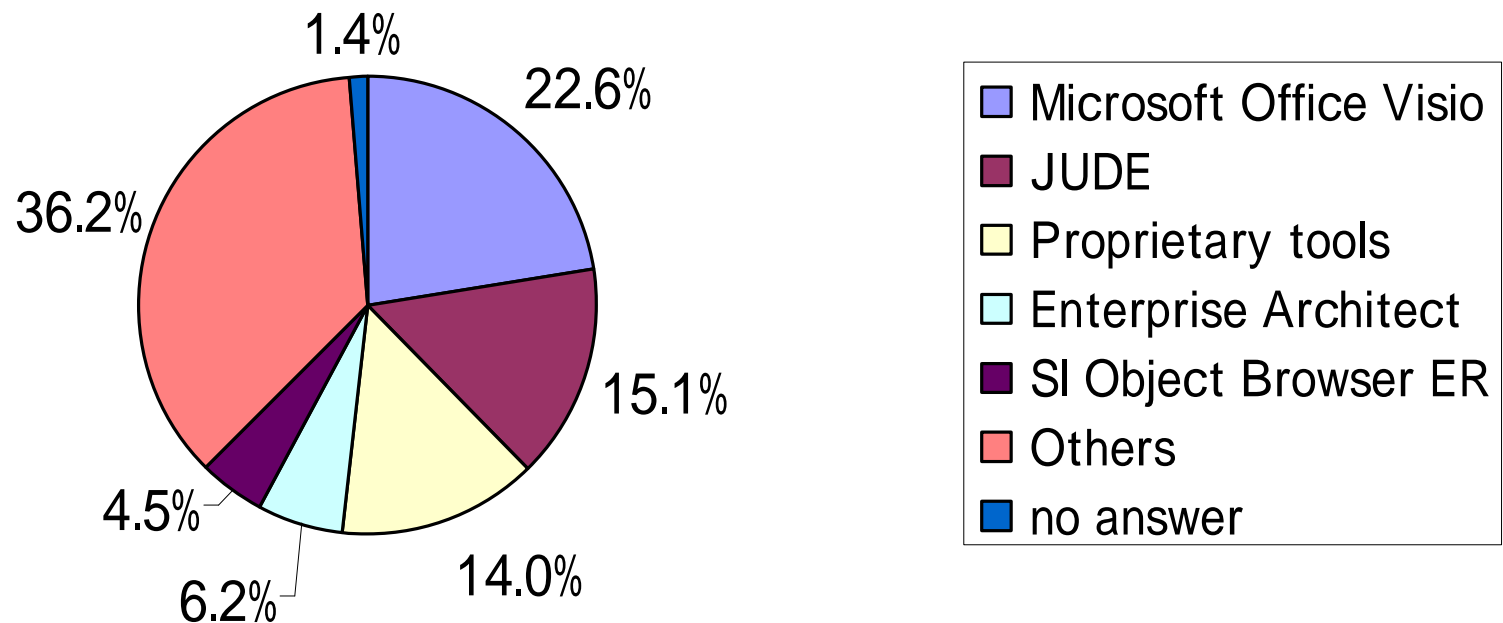
by VS users

by Eclipse users

Legend:
- Mcrosoft Office Visio
- JUDE
- Proprietary tools
- Enterprise Architect
- SI Object Browser ER
- ER Studio
- Borand Together
- EclipseUML Free Edition
- Others
- no answer

by VS users:
- 17.3%
- 1.6%
- 0.0%
- 0.0%
- 4.8%
- 3.2%
- 4.8%
- 0.0%
- 14.3%
- 54.0%

by Eclipse users:
- 0.0%
- 14.5%
- 24.0%
- 6.5%
- 6.5%
- 6.5%
- 0.0%
- 8.1%
- 0.0%
- 33.9%

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