

Survey: CAD File Sharing & Collaboration

Conducted by



February 2015

Objective

Assess the perceptions and experiences of CAD users and managers related to CAD file sharing and collaboration.

Survey Platform

Survey Monkey, www.surveymonkey.com

Total Respondents

503

Survey Sponsor

Peer Software

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Survey: CAD File Sharing & Collaboration

Summary of Results & Observations

February 2015

*by Robert Green, Cadalyst contributing editor
and Cadalyst staff*

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Objective

The online survey, titled “CAD File Sharing & Collaboration,” was conducted by Cadalyst and sponsored by Peer Software to better understand the perceptions and experiences of CAD users and their companies relative to CAD file sharing and collaboration. To our knowledge, this is the first formal survey ever conducted and published on the subject of CAD file collaboration.

Demographics

503 total respondents participated in the survey. The survey consisted of 20 questions, primarily multiple-choice and open-ended questions and combinations thereof.

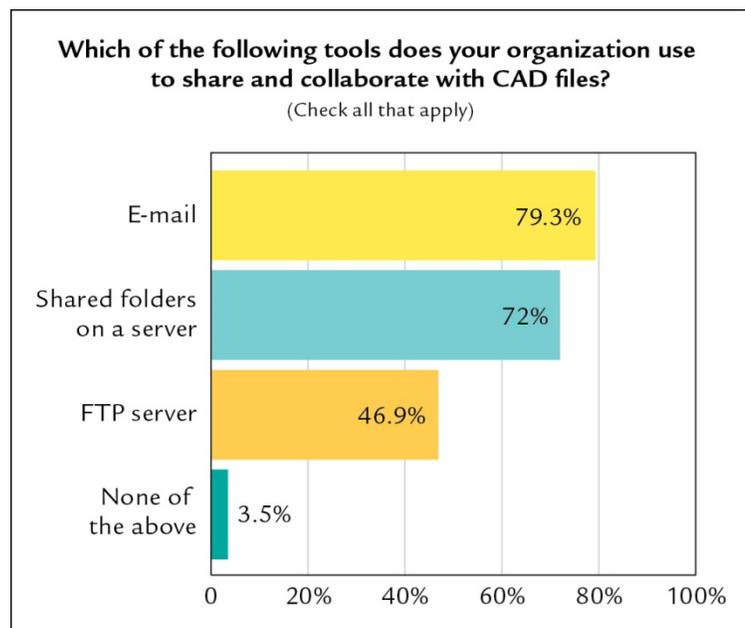
Respondents were engaged via a single e-mail campaign to contacts in Cadalyst’s database in mid-November 2014. As a thank-you for completing the survey, e-mail recipients were offered a copy of the final survey summary and results if they provided an e-mail address (via survey Question 1). No other incentive was offered or provided.

Notable Conclusions

The survey netted interesting and significant findings overall that shed previously undocumented insight into real-world challenges and experiences related to CAD file collaboration. Several findings were particularly notable and are included here along with our related observations. Data interpretation is subjective, of course, but we’ve strived to base our observations on first-hand experience in the CAD field as well as our knowledge of and feedback from the Cadalyst readership.

1. Companies still rely heavily on existing tools that are outdated and not designed to manage, share, and collaborate with CAD files (Question 16).

Nearly 80% of survey respondents report their organizations rely on e-mail to share and collaborate with CAD files. Right behind e-mail is shared folders on a server at 72%. Both are manual processes — they lack automation to track and maintain file versioning — and are bandwidth and storage intensive. Nearly half of respondents (46.9%) report that their companies use FTP servers to collaborate with CAD files — a practice that also requires manual upkeep, but does facilitate sharing of large files by those who lack access to company servers.



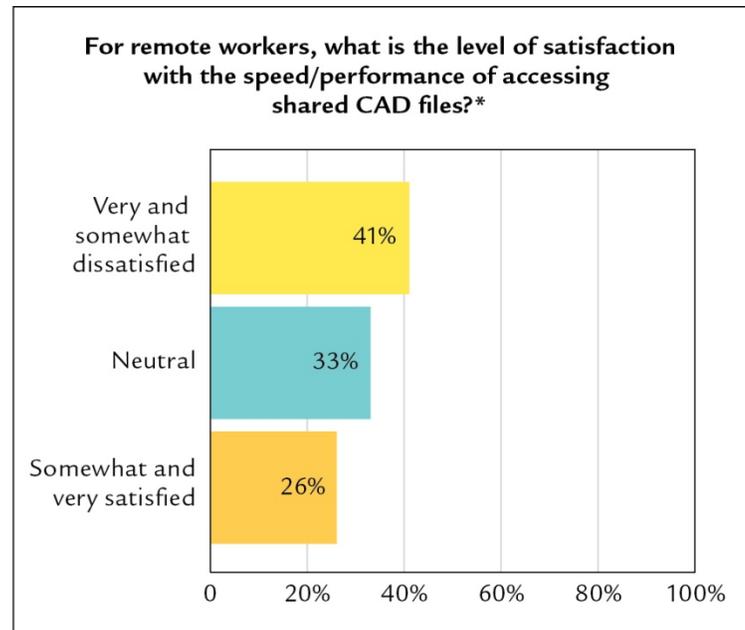
Comment: In my field work as a CAD management consultant, I have observed that senior management teams generally don't understand or appreciate the challenge that CAD users and managers face when sharing files, and therefore don't fund the advanced tools that staff members need to work effectively. This leads users to improvise solutions using outdated tools — solutions that can create significant risks associated with using incorrect file versions, lost files, and more. —RG

2. CAD users are largely dissatisfied with WAN-based file sharing (Question 18).

The survey asked respondents to indicate whether remote users are satisfied with the speed/performance of CAD file transfer in their workplaces; the results are overwhelmingly negative.

Omitting the "N/A" portion of responses nets 344 respondents who shared opinions. With a few calculations, we find the following breakdown.

- Very and somewhat dissatisfied: 41% (141 total responses)
- Neutral: 33% (113 responses)
- Somewhat and very satisfied: 26% (90 total responses)



*Data based on 344 respondents who shared opinions (after omitting those who responded "N/A")

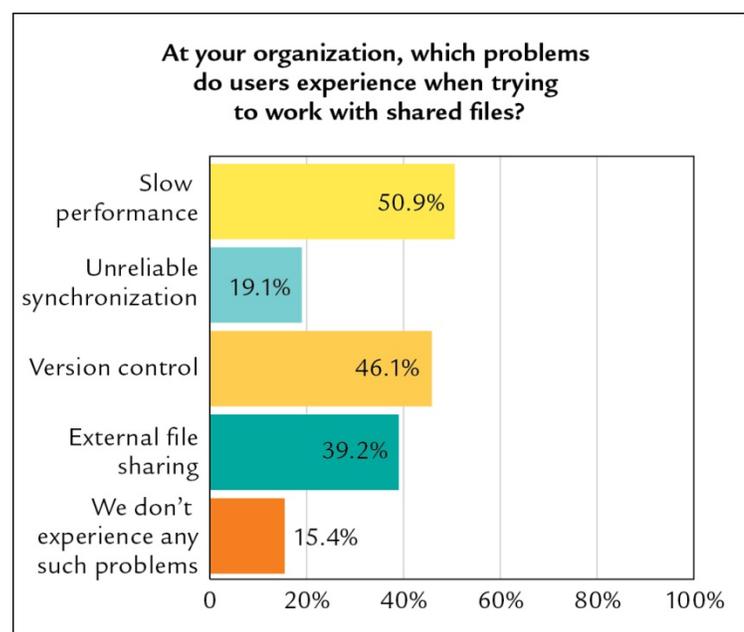
These numbers reveal a significant problem with the status quo: 74% of remote workers (33% neutral + 41% dissatisfied) are less than satisfied with the performance of their wide-area networks for CAD file sharing.

Comment: Question 3 points out that 75% of survey respondents are CAD managers, architects, drafters/designers, and engineers — that is, CAD software users. Taken together with the results outlined above for Question 18, we can conclude that dissatisfaction with WAN-based CAD file sharing is one that is strongly perceived by users in the trenches. —RG

3. CAD file collaboration problems are pervasive, and so is the risk (Question 9).

The survey reveals that CAD file collaboration challenges are not limited to "inconvenient" issues such as slow network performance. In fact, significant numbers of respondents report that they experience unreliable file synchronization between locations (19.1%), problems related to file version control (46.1%), and difficulty sharing files with external organizations (39.2%). All these problems can cause organizations to waste time and money, miss deadlines, work with inaccurate and out-of-date files, and experience corrupted or lost files.

In fact, the final survey tally demonstrates that many users experience more than one CAD file collaboration problem. Only 15.4% of respondents report not experiencing any of the listed problems, leaving nearly 85% to experience one or more.



4. Companies of all sizes are challenged by CAD file collaboration (Question 5).

Combining the insight that 85% of survey respondents report one or more problems with CAD file collaboration (see Question 9) with the fact that 60% of survey respondents work for companies that have one to five locations (Question 5), we can surmise that it isn't just the Boeings and Samsungs of the world that face CAD file collaboration problems. Indeed, the survey validates that CAD file collaboration is a problem for companies large and small.

Comment: This data supports my in-field observation that small companies are struggling to share CAD files with vendors, customers, and branch offices — problems that hinder project execution. To make matters worse, small companies must deal with these challenges without the aid of large, in-house IT departments.—RG

In Summary

The survey results paint a picture of a CAD workforce laboring in far less than ideal circumstances, with slow data transfer, lack of file version control, unreliable data synchronization between locations, and other file-sharing issues that create risk and derail project workflows. In fact, the survey indicates that nearly three-fourths of remote workers are less than satisfied with WAN-based file sharing. All told, the workplace realities revealed by the survey demand attention if organizations are to address the projects risks and lost time and money that result from using inadequate and outdated CAD file collaboration technologies.

Survey Results

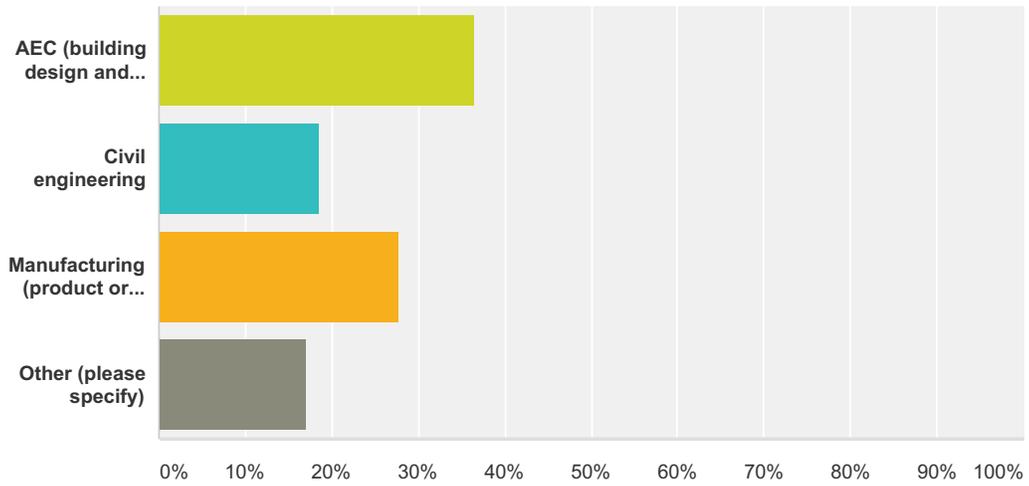
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Section 1

**Tell us about yourself
and your organization**

Q2 In which industry does your organization perform most of its CAD work?

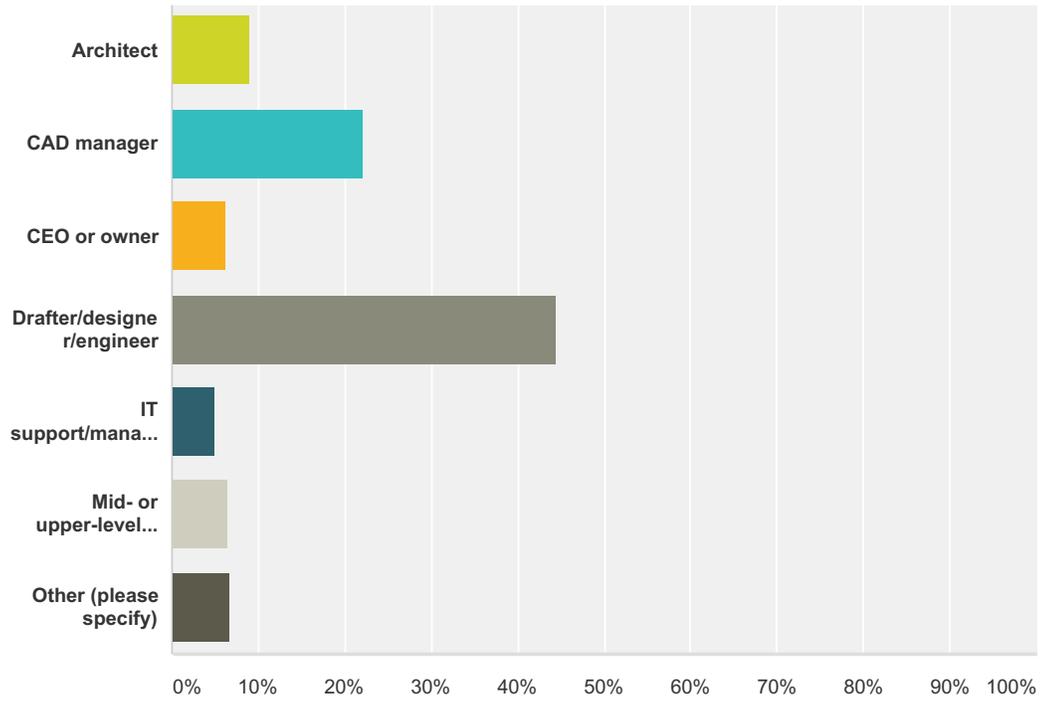
Answered: 503 Skipped: 0



Answer Choices	Responses
AEC (building design and construction)	36.58% 184
Civil engineering	18.49% 93
Manufacturing (product or machine design)	27.83% 140
Other (please specify)	17.10% 86
Total	503

Q3 What is your job function?

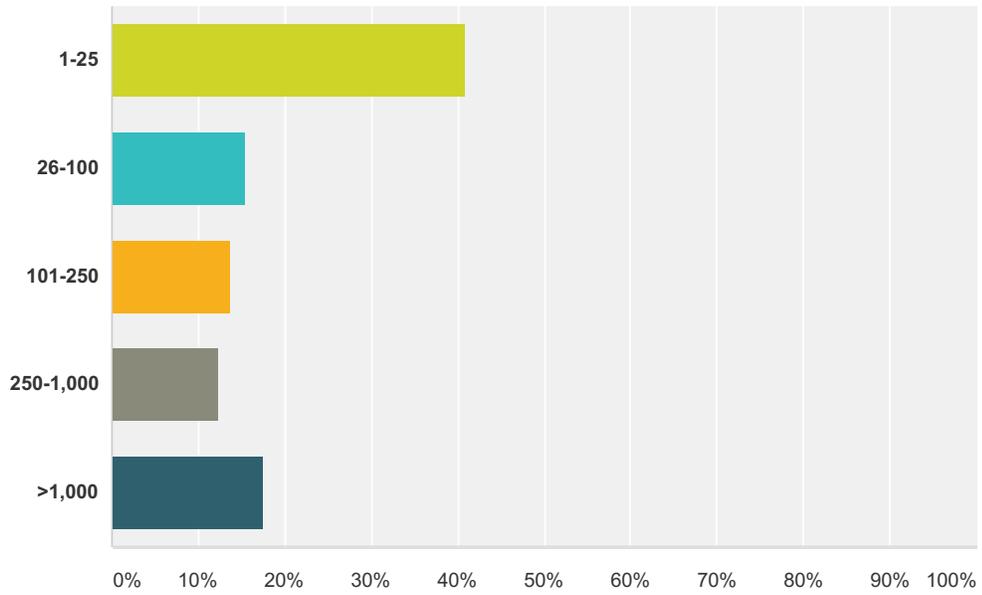
Answered: 503 Skipped: 0



Answer Choices	Responses
Architect	8.95% 45
CAD manager	22.07% 111
CEO or owner	6.16% 31
Drafter/designer/engineer	44.53% 224
IT support/management	4.97% 25
Mid- or upper-level management	6.56% 33
Other (please specify)	6.76% 34
Total	503

Q4 How many employees are in your organization?

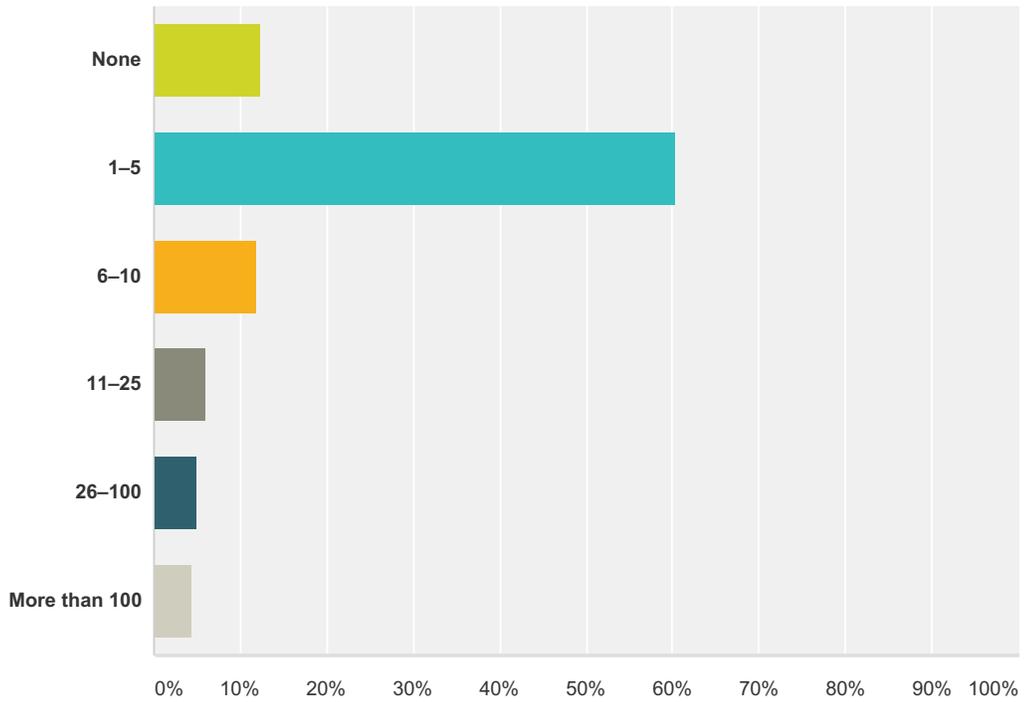
Answered: 503 Skipped: 0



Answer Choices	Responses
1-25	40.95% 206
26-100	15.51% 78
101-250	13.72% 69
250-1,000	12.33% 62
>1,000	17.50% 88
Total	503

Q5 Within your organization, how many office locations share CAD files?

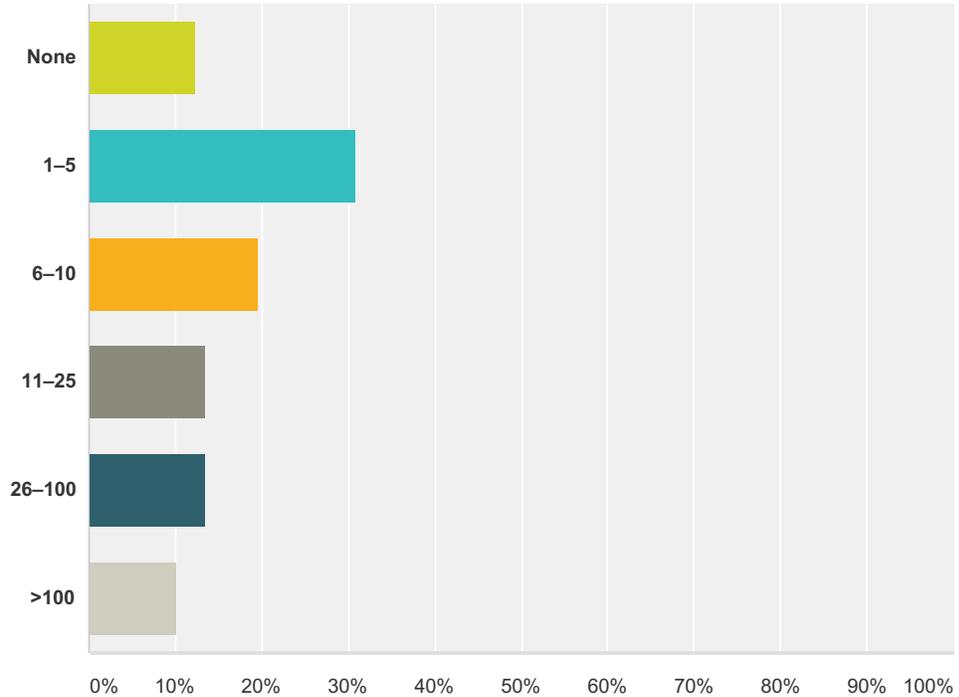
Answered: 503 Skipped: 0



Answer Choices	Responses
None	12.33% 62
1-5	60.44% 304
6-10	11.93% 60
11-25	5.96% 30
26-100	4.97% 25
More than 100	4.37% 22
Total	503

Q6 Outside your organization (partners, subcontractors, vendors, etc.), how many office locations does your organization share CAD files with?

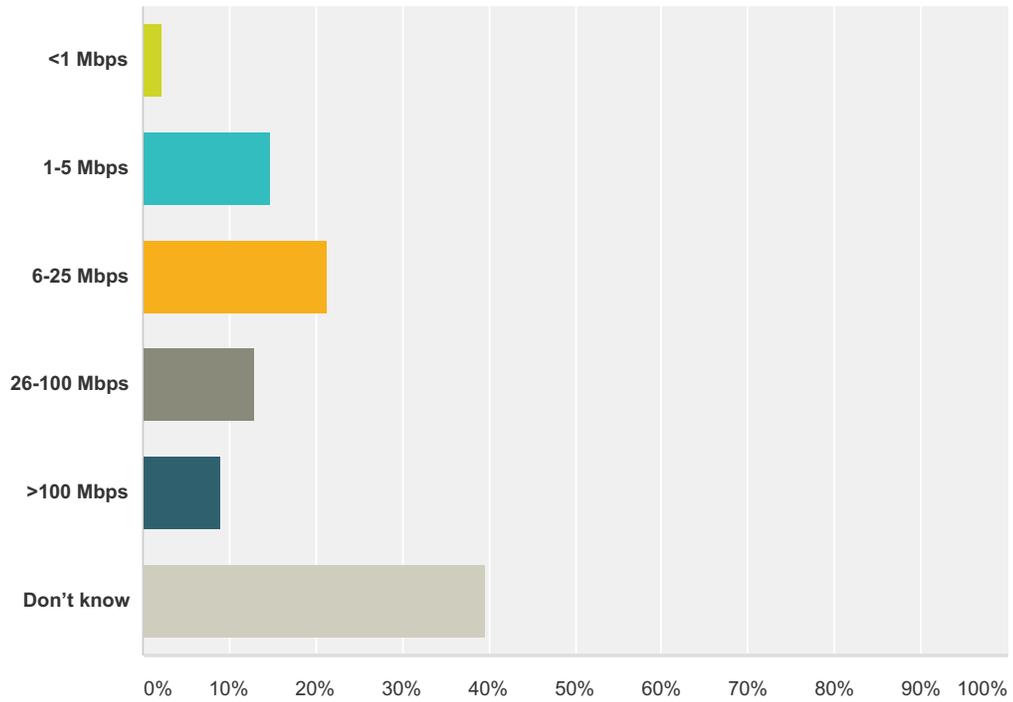
Answered: 503 Skipped: 0



Answer Choices	Responses	Count
None	12.33%	62
1-5	30.82%	155
6-10	19.68%	99
11-25	13.52%	68
26-100	13.52%	68
>100	10.14%	51
Total		503

Q7 On average, how fast is the data connection between your offices?

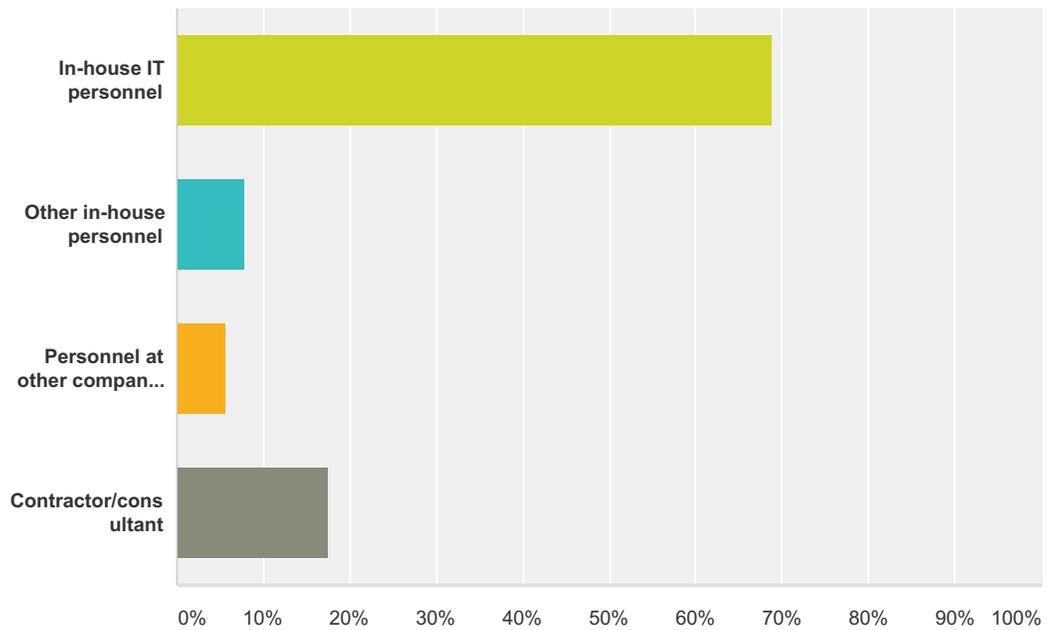
Answered: 503 Skipped: 0



Answer Choices	Responses
<1 Mbps	2.39% 12
1-5 Mbps	14.91% 75
6-25 Mbps	21.27% 107
26-100 Mbps	12.92% 65
>100 Mbps	8.95% 45
Don't know	39.56% 199
Total	503

Q8 Who is primarily responsible for your organization's IT support?

Answered: 462 Skipped: 41



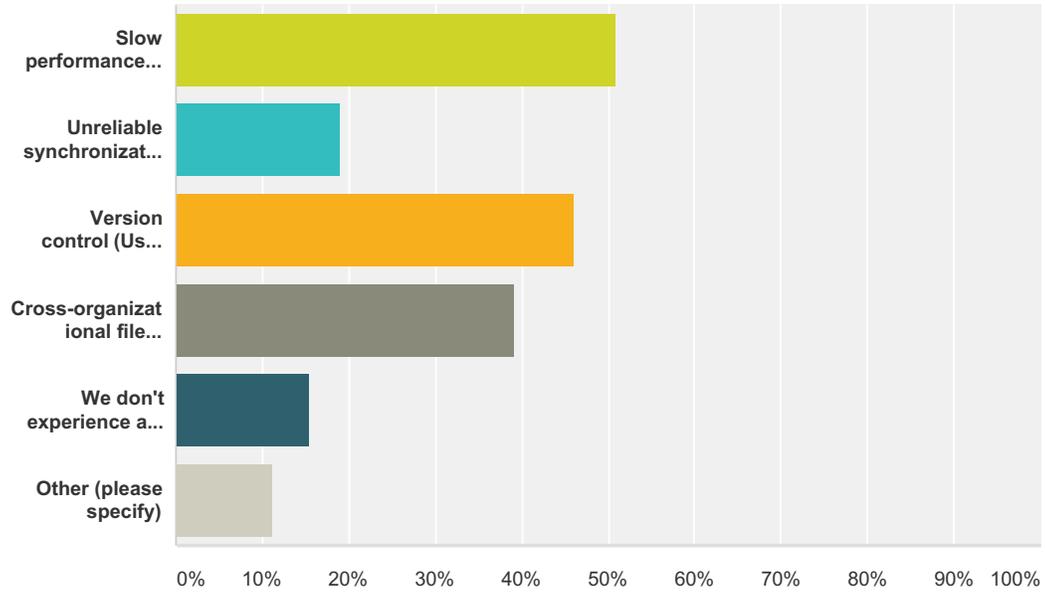
Answer Choices	Responses	Count
In-house IT personnel	68.83%	318
Other in-house personnel	8.01%	37
Personnel at other company locations	5.63%	26
Contractor/consultant	17.53%	81
Total		462

Section 2

**Tell us about your
experience with CAD file
sharing and collaboration**

Q9 At your organization, which problems do users experience when trying to work with shared files? (Check all that apply.)

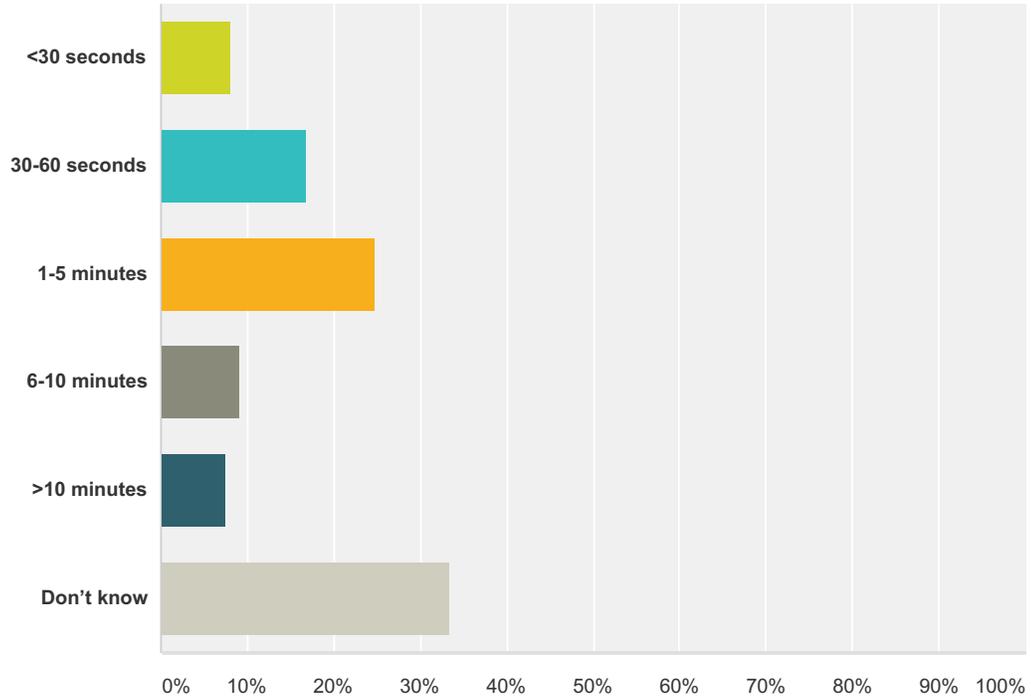
Answered: 462 Skipped: 41



Answer Choices	Responses	
Slow performance (Files take too long to download and open)	50.87%	235
Unreliable synchronization (Files don't always sync between locations)	19.05%	88
Version control (Users lose files or are not sure if they have the latest version of a file)	46.10%	213
Cross-organizational file sharing (It's difficult to share files with external organizations)	39.18%	181
We don't experience any such problems	15.37%	71
Other (please specify)	11.26%	52
Total Respondents: 462		

Q10 On average, how much EXTRA TIME does it take for remote workers to access/upload shared CAD files vs. being at a headquarters location?

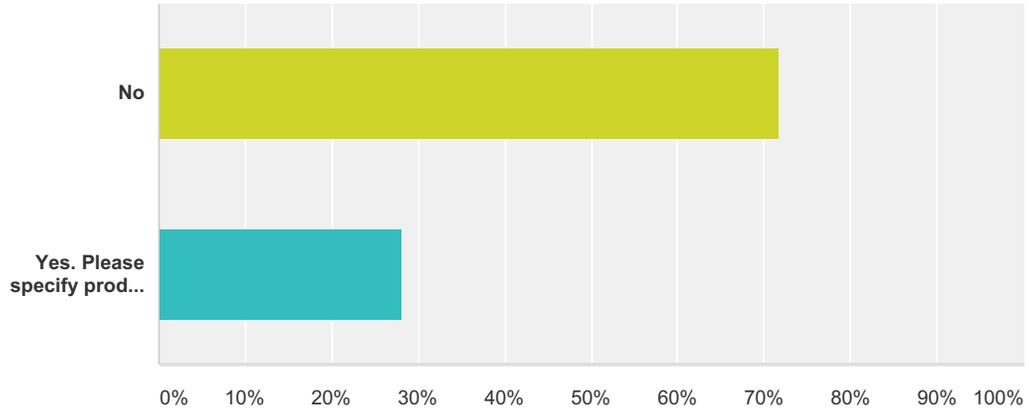
Answered: 462 Skipped: 41



Answer Choices	Responses
<30 seconds	8.23% 38
30-60 seconds	16.88% 78
1-5 minutes	24.89% 115
6-10 minutes	9.09% 42
>10 minutes	7.58% 35
Don't know	33.33% 154
Total	462

Q11 Does your organization use enterprise social collaboration (e.g., SharePoint, GoToMeeting) for CAD file sharing and collaboration?

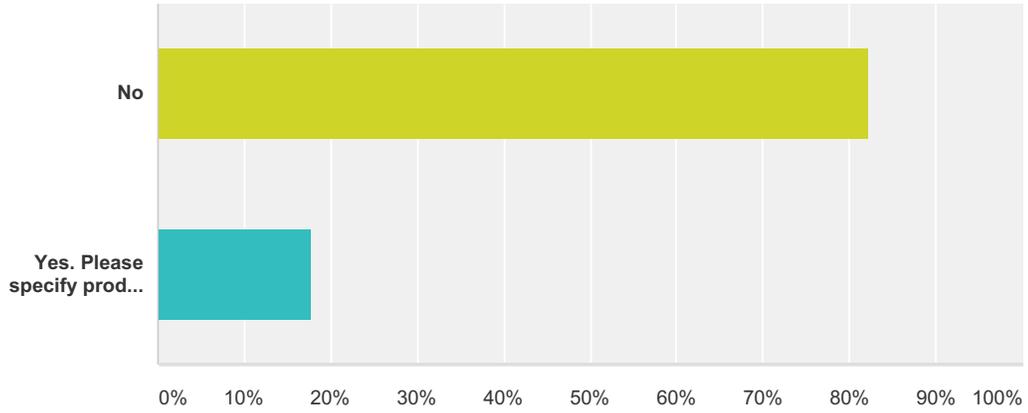
Answered: 435 Skipped: 68



Answer Choices	Responses	
No	71.72%	312
Yes. Please specify product name(s):	28.28%	123
Total		435

Q12 Does your organization use a vault or PDM/PLM solution (e.g., Autodesk Vault, Siemens Teamcenter) for CAD file sharing and collaboration?

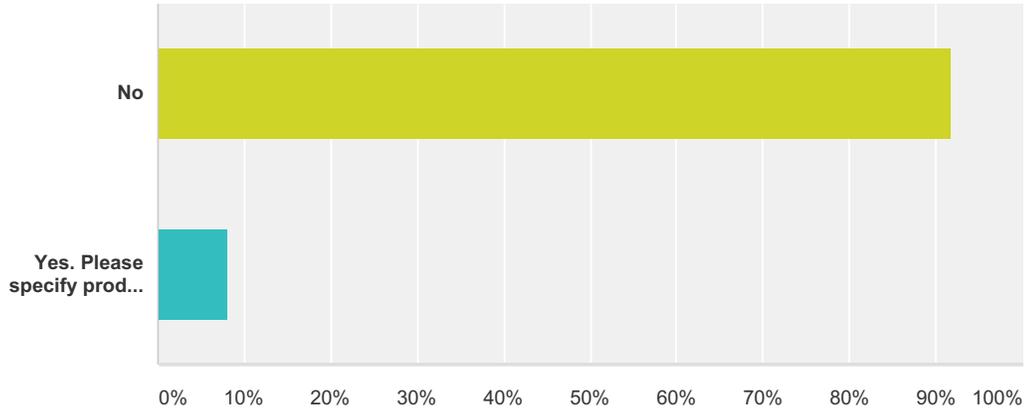
Answered: 435 Skipped: 68



Answer Choices	Responses
No	82.30% 358
Yes. Please specify product name(s):	17.70% 77
Total	435

Q13 Does your organization use file replication software (e.g., Microsoft DFSR, Peer Software) for CAD file sharing and collaboration?

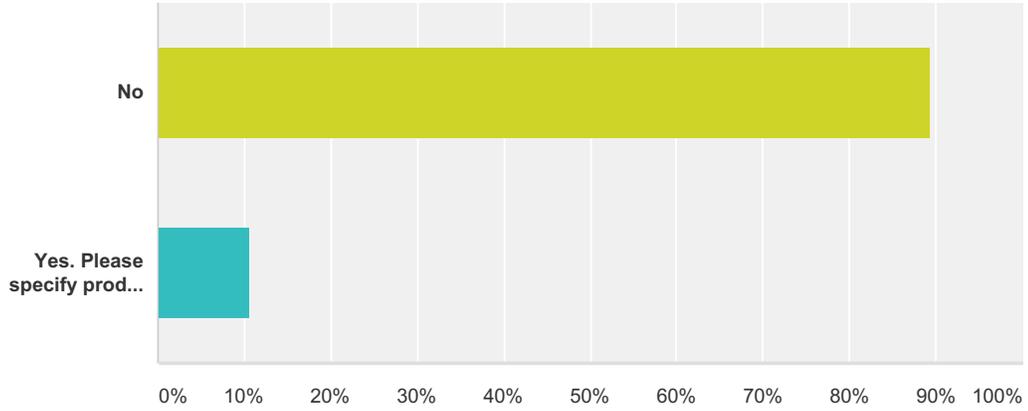
Answered: 435 Skipped: 68



Answer Choices	Responses
No	91.95% 400
Yes. Please specify product name(s):	8.05% 35
Total	435

Q14 Does your organization use WAN optimization (e.g., Riverbed, Cisco WAAS) for CAD file sharing and collaboration?

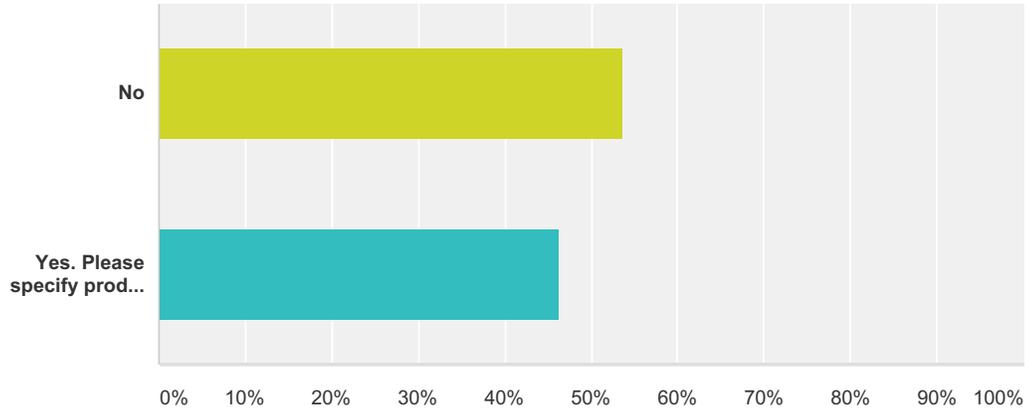
Answered: 435 Skipped: 68



Answer Choices	Responses
No	89.43% 389
Yes. Please specify product name(s):	10.57% 46
Total	435

Q15 Does your organization use a cloud-based file sharing service (e.g., Box, Dropbox) for CAD file sharing and collaboration?

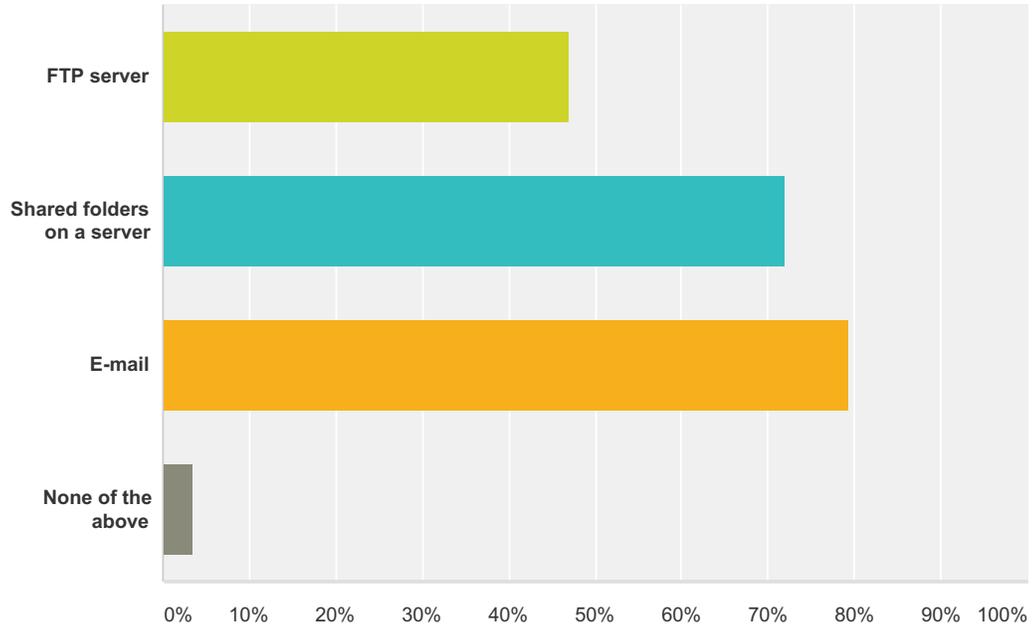
Answered: 435 Skipped: 68



Answer Choices	Responses
No	53.56% 233
Yes. Please specify product name(s):	46.44% 202
Total	435

Q16 Which of the following tools does your organization use to share and collaborate with CAD files? (Check all that apply.)

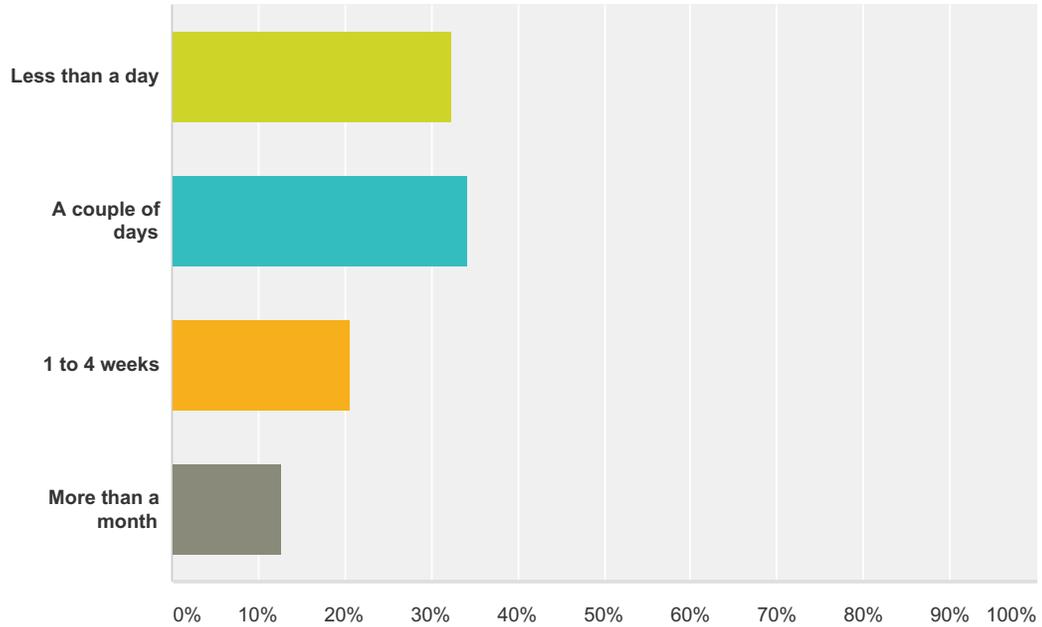
Answered: 435 Skipped: 68



Answer Choices	Responses
FTP server	46.90% 204
Shared folders on a server	71.95% 313
E-mail	79.31% 345
None of the above	3.45% 15
Total Respondents: 435	

Q17 How long do you believe it should take to implement a file sharing and collaboration solution?

Answered: 421 Skipped: 82



Answer Choices	Responses
Less than a day	32.30% 136
A couple of days	34.20% 144
1 to 4 weeks	20.67% 87
More than a month	12.83% 54
Total	421

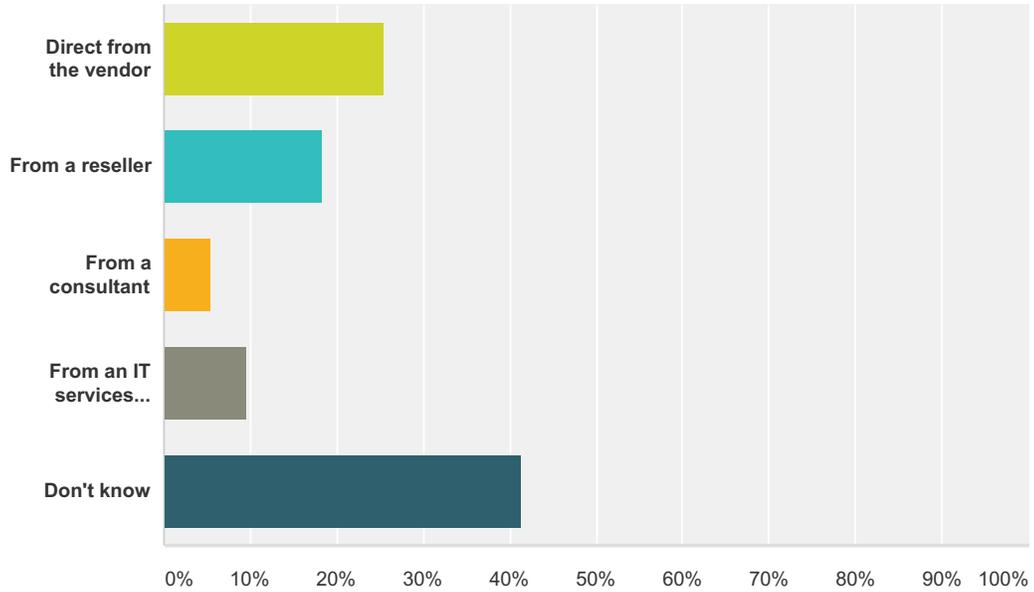
Q18 For remote workers, what is the level of satisfaction with the speed/performance of accessing shared CAD files?

Answered: 421 Skipped: 82

	Very dissatisfied	Somewhat dissatisfied	Neutral	Somewhat satisfied	Very satisfied	N/A	Total	Weighted Average
(no label)	9.74% 41	23.75% 100	26.84% 113	14.96% 63	6.41% 27	18.29% 77	421	2.81

Q19 Where would your organization purchase a CAD file sharing and collaboration solution?

Answered: 421 Skipped: 82



Answer Choices	Responses
Direct from the vendor	25.42% 107
From a reseller	18.29% 77
From a consultant	5.46% 23
From an IT services provider	9.50% 40
Don't know	41.33% 174
Total	421