Local Network

Thank you for participating in our survey.

On the following pages, we will present you with a hypothetical scenario involving a new app you install on your phone. The app will request a permission upon launch. You will then be asked a series of questions (true/false, multiple choice) about your personal knowledge of the terminology and concepts involved with the permission.

Please answer each question to the best of your knowledge. This survey is not an assessment of your personal skills but rather a measurement of the current knowledge across the general public. Your **compensation will not depend on your performance,** so please answer all questions honestly.

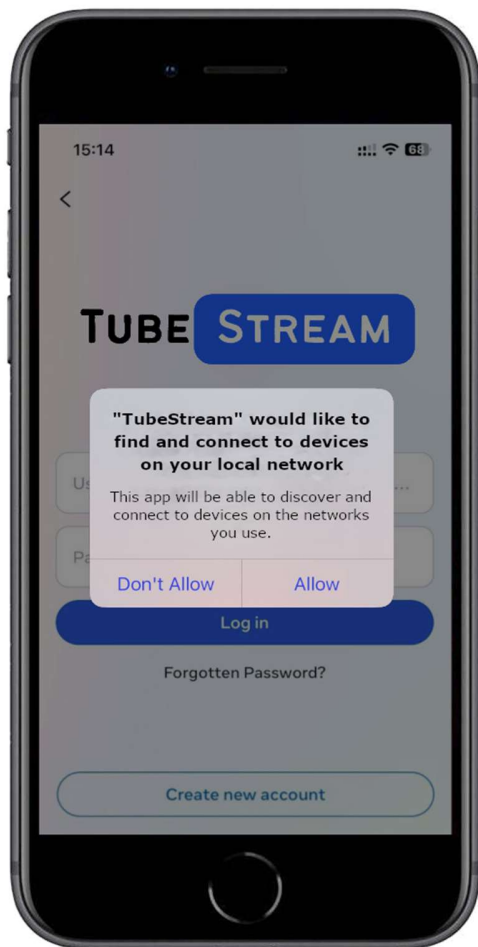**TubeStream** is a widely popular online **video-sharing platform** where users can upload, view, and interact with a vast array of videos. It offers content ranging from entertainment, educational tutorials, music videos, vlogs, to documentaries.

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You decide to install TubeStream on your iPhone. When you launch the app for the first time, you receive the following prompt.

Have you ever encountered this specific permission (local network access) before in any app? (Show permission dialog again)

○ Yes

○ No

○ I don't know

Do you know what a "local network" is?

○ **Yes,** I know what a local network is

○ **No,** I don't know what a local network is

Please explain what you think "local network" means:

_____

_____

_____

_____

_____

Why did you not explain what you think "local network" means?

○ I don't know what "local network" means

○ I did not want to answer that question

○ Other (please specify): _____

Which statements about local networks are true?

☐ The local network is mostly just the Internet.

☐ All devices connected to the same WiFi network form a local network.

☐ If I give my WiFi network's password to guests, they can connect their devices to my local network.

☐ If I visit Wikipedia, the Wikipedia web server and my phone are on the same local network.

☐ Networks and devices that are located physically close to each other form a local network.

☐ Any network-enabled device that is within the range of my phone's antenna is part of it's local network.

☐ None of the above

☐ I don't know

What are possible use cases where an app needs the local network access permission? (Show permission dialog again)

- ☐ Play back sound on your Bluetooth speaker/headphones

- ☐ Access the Internet over WiFi (otherwise only mobile data is available)

- ☐ Stream videos to your smart TV

- ☐ Discover other mobile phones on the same network, e.g., to share videos

- ☐ None of the above

- ☐ I don't know

End of Block: At home 2

Start of Block: Block 14

We now present you with a series of scenarios. For each statement, please choose if it is true or false.

End of Block: Block 14

Start of Block: Permission granted 1

If you grant the local network permission, the app can read your WiFi network's password while you are connected to it. (Show permission dialog again)

- ○ True

- ○ False

- ○ I don't know

Page Break

If you grant the local network permission, the developer (TubeStream Inc.) can determine when you enter and leave a location (home, office, cafe, etc.) based on local network information, given that you are connected to the WiFi network there. (Show permission dialog again)

○ True

○ False

○ I don't know

Page Break ———————————————————————————————

If you grant the local network permission, the developer (TubeStream Inc.) can determine your approximate location based on local network information, provided that they have knowledge of a device's location connected to the same WiFi network. (Show permission dialog again)

○ True

○ False

○ I don't know

Page Break ———————————————————————————————

If you grant the local network permission, the developer (TubeStream Inc.) can determine which people you are associated with (e.g., living in the same household, working with you), provided that those people's devices are connected to the same WiFi network as yours. (Show permission dialog again)

○ True

○ False

○ I don't know

Page Break ———————————————————————————————

If you grant the local network permission, the developer (TubeStream Inc.) can access files and images in your phone's local storage. (Show permission dialog again)

○ True

○ False

○ I don't know

Page Break ————————————————————————————————————

If you grant the local network permission, the developer (TubeStream Inc.) can detect which other devices you own, if they are connected to the same WiFi network. (Show permission dialog again)

○ True

○ False

○ I don't know

If you grant the local network permission, the developer (TubeStream Inc.) can determine whether you own any sensitive devices (e.g., security cameras, health-related devices), if they are connected to the same WiFi network. (Show permission dialog again)

○ True

○ False

○ I don't know

Page Break ————————————————————————————————————

If you grant the local network permission, and an attacker manages to hack the app, they can now interact with devices on your local network that are not directly accessible from the Internet. (Show permission dialog again)

○ True

○ False

○ I don't know

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If you grant the local network permission, your phone now becomes visible to other devices on the same WiFi network (otherwise it would be invisible). (Show permission dialog again)

○ True

○ False

○ I don't know

End of Block: Permission granted 1

Start of Block: Block 17

For the following statements, please imagine that you granted the permission while you were at home, connected to your WiFi network.

End of Block: Block 17

Start of Block: Outside 1

If you granted the local network permission while at home, the app can connect to a smart TV in the showcase of a shop you happen to walk by. (Show permission dialog again)

○ True

○ False

○ I don't know

Page Break ——————————————————————————————

If you granted the local network permission while at home, the app can detect mobile phones of people passing you on the street. (Show permission dialog again)

○ True

○ False

○ I don't know

Page Break ——————————————————————————————

If you granted the local network permission while at home, the app can connect to your smart TV back at home while you are away grocery shopping. (Show permission dialog again)

○ True

○ False

○ I don't know

End of Block: Outside 1

Start of Block: Block 15

For the following statements, please remember that you granted the permission while you were at home, connected to your WiFi network.

End of Block: Block 15

Start of Block: Cafe 1

If you granted the local network permission while at home, the app can detect the smart TV inside a cafe, while you are connected to the cafe's free WiFi network. (Show permission dialog again)

○ True

○ False

○ I don't know

—————————————————————

If you granted the local network permission while at home, the app can detect the network printer in your office, while you are connect to your office's WiFi network. (Show permission dialog again)

○ True

○ False

○ I don't know

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If you granted the local network permission while at home, the app can discover other phones on the same WiFi network, while you are connected to the cafe's free WiFi network. (Show permission dialog again)

○ True

○ False

○ I don't know

If you granted the local network permission while at home, the app can discover your colleagues' phones on the same WiFi network, while you are connected to your office's WiFi network. (Show permission dialog again)

○ True

○ False

○ I don't know

Page Break

If you granted the local network permission while at home, the app can record ambient noise around you, while you are connected to the cafe's free WiFi network. (Show permission dialog again)

○ True

○ False

○ I don't know

If you granted the local network permission while at home, the app can discover your customers' phones, who are not connect to your office's WiFi network, while you are connected to your office's WiFi network. (Show permission dialog again)

○ True

○ False

○ I don't know

End of Block: Cafe 1

Start of Block: ATI scale

In the following questionnaire, we will ask you about your interaction with technical systems. The term "technical systems" refers to apps and other software applications, as well as entire digital devices (e.g. mobile phone, computer, TV, car navigation).

Please indicate the degree to which you agree/disagree with the following statements.

	completely disagree	largely disagree	slightly disagree	slightly agree	largely agree	completely agree
I like to occupy myself in greater detail with technical systems.	○	○	○	○	○	○
I like testing the functions of new technical systems.	○	○	○	○	○	○
I predominantly deal with technical systems because I have to.	○	○	○	○	○	○
When I have a new technical system in front of me, I try it out intensively.	○	○	○	○	○	○
I enjoy spending time becoming acquainted with a new technical system.	○	○	○	○	○	○
It is enough for me that a technical system works; I don't care how or why.	○	○	○	○	○	○

I try to understand how a technical system exactly works.	○	○	○	○	○	○
It is enough for me to know the basic functions of a technical system.	○	○	○	○	○	○
I try to make full use of the capabilities of a technical system.	○	○	○	○	○	○

How old are you?

○ Under 18

○ 18-24 years old

○ 25-34 years old

○ 35-44 years old

○ 45-54 years old

○ 55-64 years old

○ 65+ years old

How do you describe yourself?

○ Male

○ Female

○ Non-binary / third gender

○ Prefer to self-describe _____

○ Prefer not to say

X→

In which country do you currently reside?

▼ Afghanistan ... Zimbabwe

Do you have a background in information technology (IT)?

☐ Work-related background (Software developer, software architect, IT consultant, administrator, etc.)

☐ Educational background (degree in computer science or related field)

☐ Personal interest, self-taught

☐ No IT background

Which is the latest iOS version you use on at least one device? (How to find your iOS version)

Go to Settings → General → About → iOS Version

▼ 17 ... I don't use iOS

Almost done!

Surveys like this one can provide valuable insights for scientific studies, which ultimately help us providing users with stronger, more usable security mechanisms.

To maximize the insights gained from this study, **we need to ensure the quality of our data.** Sometimes, participants get distracted while filling out a survey, sometimes they can't or don't want to invest the necessary time or effort to compile all questions with diligence. This is perfectly fine! We would simply like to ensure the quality of our data by filtering out such responses.

Therefore, please indicate if you want your responses to contribute to our study or if you would rather have us discard them. **You will receive your compensation regardless of your answer!**

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Did you fill out this survey attentively and want us to include your data in our scientific evaluation?

○ **Yes,** include my responses in the scientific evaluation

○ **No,** discard my responses and don't include them in the evaluation

Thank you for taking part in this study! Please click the button below to be redirected back to Prolific and register your submission.