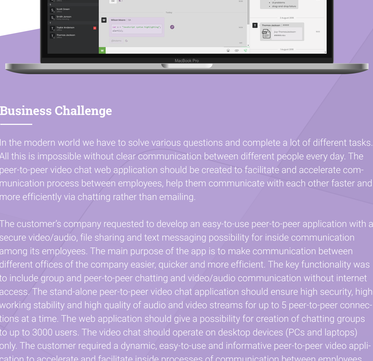
XB Software

We have successfully completed over 175 projects in 65+ countries across the globe. The majority of our clients reside in the United States, Canada and the European Union.

Stand-alone Peer-To-Peer Video Chat Application

A straightforward stand-alone peer-to-peer video chat application. It provides quick, convenient and highly secure video/audio and text messaging for peer-to-peer and group communication between the employees from the same company. Implementation of the peer-to-peer application allowed the client to use a wide variety of possibilities in communication, file sharing and can save time for additional steps and negotiations.

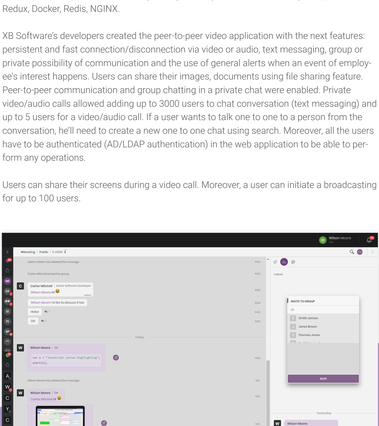


2016–

Business Challenge

In the modern world we have to solve various questions and complete a lot of different tasks. All this is impossible without clear communication between different people every day. The peer-to-peer video chat web application should be created to facilitate and accelerate communication process between employees, help them communicate with each other faster and more efficiently via chatting rather than emailing.

The customer's company requested to develop an easy-to-use peer-to-peer application with a secure video/audio, file sharing and text messaging possibility for inside communication among its employees. The main purpose of the app is to make communication between different offices of the company easier, quicker and more efficient. The key functionality was to include group and peer-to-peer chatting and video/audio communication without internet access. The stand-alone peer-to-peer video chat application should ensure high security, high working stability and high quality of audio and video streams for up to 5 peer-to-peer connections at a time. The web application should give a possibility for creation of chatting groups to up to 3000 users. The video chat should operate on desktop devices (PCs and laptops) only. The customer required a dynamic, easy-to-use and informative peer-to-peer video application to accelerate and facilitate inside processes of communication between employees and offices of the company.



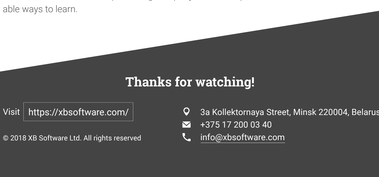
Solution

XB Software team was required to develop an efficient and stable corporate stand-alone peer-to-peer video application which should operate without the internet connection. The development team represented by a business analyst, WebRTC and React developers as well as QA engineers was responsible for the creating the bug-free code of the web application.

To guarantee high security of inside communications via the application we applied WebRTC technology. WebRTC security is enabled by standardized encryption methods that have been proven to protect users from unwanted entrance into their private information. Its standards offer excellent protections in addition to the revolutionary streaming voice and video features that define the technology.
The front-end of the peer-to-peer video chat application was implemented using React.JS and CSS, which helped to create the user-friendly design and clear features of the application. The back-end of the app was made using Node.js and MySQL. Other technologies applied include Redux, Docker, Redis, NGINX.

XB Software's developers created the peer-to-peer video application with the next features: persistent and fast connection/disconnection via video or audio, text messaging, group or private possibility of communication and the use of general alerts when an event of employee's interest happens. Users can share their images, documents using file sharing feature. Peer-to-peer communication and group chatting in a private chat were enabled. Private video/audio calls allowed adding up to 3000 users to chat conversation (text messaging) and up to 5 users for a video/audio call. If a user wants to talk one to one to a person from the conversation, he'll need to create a new one to one chat using search. Moreover, all the users have to be authenticated (AD/LDAP authentication) in the web application to be able to perform any operations.

Users can share their screens during a video call. Moreover, a user can initiate a broadcasting for up to 100 users.



Duration

1,5+ years

Estimated man-hours

6 000+

Applied Technologies

React, Node.js, MySQL, WebRTC, Redux, docker, redis, NGINX

Our Role in Client's Success

XB Software WebRTC and React.js developers built an easy-to-use stand-alone peer-to-peer web application with a possibility of audio/video communication and text messaging. The chat based on WebRTC technology will work only inside the local network of the customer, without internet access.

The app has a simple login form and allows users to:

- create private peer-to-peer text messaging and video/audio communication chat
- create, edit or delete a group for text or video communication
- add users to the group
- write, share, search, resend, edit or delete their messages
- pin the main message
- mention the user in the message
- share information with a group
- fileshare by intuitive drag-and-drop
- view the groups' notifications

Moreover, the peer-to-peer video chat app has an intuitive and adaptive user interface with collapsible menu. The video chat app simplified the communication process between employees and made the interaction between different offices of the company easier and more fruitful.

Customer

A US-based education and publishing company that develops the most effective and affordable ways to learn.

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