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Implementation and use of online chats in Internet based business models

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Abstract

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This thesis was started in response to the Diva project, which is a project started by Haaga-Helia that creates new scientific information on how a business-to-business company may increase their sales. In the thesis, five different online chat provider's software were implemented and tested. A table that summarizes the features of these five software was made according to the features found within the testing phase.

An online chat is an application that allows conversing via internet protocols. This thesis covers background information on online chats and their security, as well as information on the implementation and uses of online chats. The thesis also provides information on things to be considered before choosing to implement an online chat, as well as on benefits and challenges an online chat might make for a company.

The thesis was done using the qualitative research method. The thesis uses web sources as the main source, and the background information on online chats and their security is based on these sources. The empirical part of the thesis is the implementation and testing of the chosen software.

The five different software tested had the same core functionality and features, but also had many differences in both the user interface level and additional features. It is important to take notes on a company's needs from an online chat before starting to gauge the online chat market's products.

Keywords

Online chat, Implementation, Testing, Security, Features, User Interface

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Abbreviations and terms

VoIP	Voice over IP
SMSC	Short Message Service Control Channel
BPMN	Business Process Model and Notation
HTML	Hypertext Markup Language
CRM	Customer Relationship Management
Agent/Operator	A personnel within the company that answers to customers queries within online chat software
Visitor	A customer using the online chat implemented within the company's website
Administrator	A personnel within the company that has access to modifying the features of the online chat software as well as being able to answer queries from customers

1   Introduction

Online chats are a part of many people's lives nowadays. Whether it be casually chatting with friends or using online chats for business purposes, most people use online chats almost daily. This thesis was done in response to the diva research project, which is a project that creates new scientific information on how a business-to-business company may increase their sales (Diva Research).

In this thesis, the main focus is on the implementation process and features of online chats that are directed for business use. The thesis shortly gives general information on what is an online chat as well as answers to what different kinds of uses online chats have.

1.1   Research objectives

The objective of this thesis is to give information on how to implement an online chat to a website and what benefits and challenges an online chats may offer to a company. The thesis also offers a compact package of basic information on online chats to people who are new to the topic. The thesis makes a comparison between five different online chat software available within the market, giving a comparison on their features and user interfaces.

1.2   Research questions

The main research questions in this thesis are:
- What kind of company could have use for online chats?
- How to implement an online chat to a website.
- What are the interface requirements to online chat implementation?
- What differences are there within the software provider's online chat software?
- What benefits and challenges does an online chat implementation offer to a company?

1.3   Research methods

The research method that was mainly used in this thesis was the qualitative research method. The thesis begins by giving a general outlook into online chats based in literature and articles. There is also information on the security issues of online chats and how to counteract these issues. The information is gathered from various web-based sources, providing a theoretical approach on the topic for the reader.

The second part of the thesis gives an empiric approach into the topic by comparing different online chat provider's software. The thesis also gives an empiric example in how to

implement an online chat into a website. Five different online chat provider's software were implemented and tested in the thesis. The thesis also lists different challenges and benefits to be found when implementing an online chat software to company's infrastructure.

1.4 Research scope

The scope of the thesis is to give general information on online chats as well as to give information on implementing an online chat, comparison between different solutions and information on the benefits and challenges of having an online chat implemented to company infrastructure. The general information part is divided within the first two chapters, first one giving general information on online chats, its uses and features while the second chapter gives information on online chat's security issues as well as countermeasures for the so said issues.

The second part gives an empirical example on the implementation of online chat, as well as the comparison between five different online chat software providers software. The comparison provides information on the differences in features and the user interface between the chosen software. The second part includes information on the challenges and benefits from having an online chat integrated. There is also information on what to consider when deciding whether a company needs an online chat as well as some opinions what to consider when choosing an online chat.

2   Online chats

Online chats provide real-time transmission of messages between the sender and receiver(s). Messages within online chats are oftentimes quite short to provide an experience close to a real conversation. Some online chats also let their users to send their picture through webcam as well as voice through microphone. (Rouse 2005a.)

When starting to use an online chat, it is oftentimes required for a user to create an account one way or another to authenticate the nickname the user wants to use. For example in Skype the user needs to login with a registered account within the application interface before chatting, all contacts being linked to the account of the user. (Rouse 2005a.)

Online chats can also be browser-based or client-based. In browser-based online chat, the user uses the online chat through a chat interface within their browser. In client-based chat, the user needs to install the online chat's client, such as Skype, to their computer. Many online chats nowadays have the option for both, making it possible to access the chat by either installing the client software and using it or accessing the chat within a browser-based application. The Figure 1 below shows a basic outlook of a client-based online chat. On the left there is a list of contacts, the box on the right is the chat. (Rouse 2005a.)
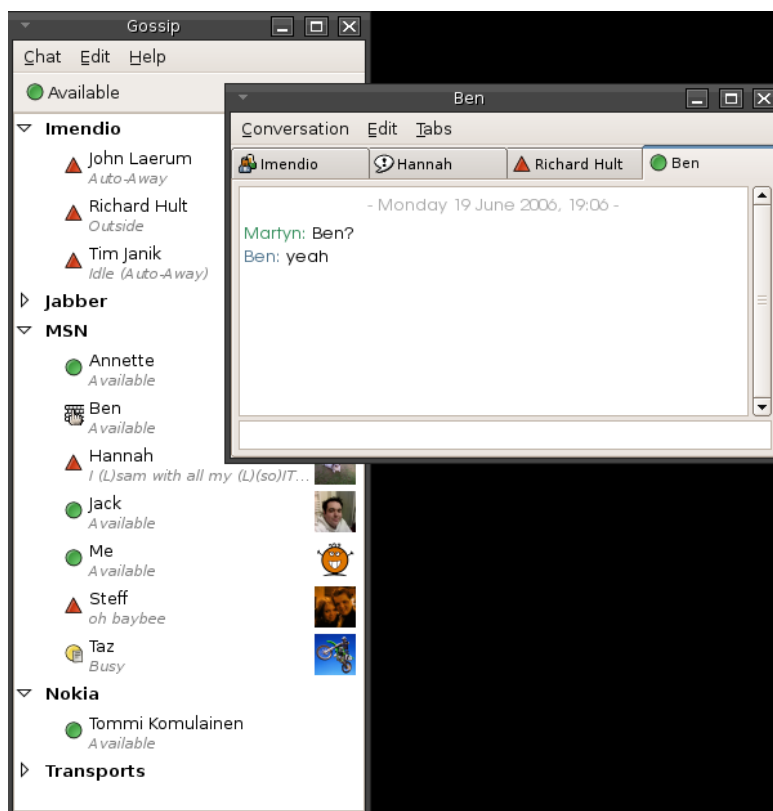

Figure 1: Basic outlook of a client-based online chat (Client-based online chat.)

There are also online chats that let people converse by talking. These are called Voice over IP (VoIP) chats. VoIP-service can be used in things such as customer service, to give the

customer a better experience. Some online chat applications have access to both VoIP and a normal chat. The Figure 2 below shows Skype interface. Skype is one of the leading client-based online chat applications, allowing the user to call or chat with his contacts. Skype also supports webcam and file sending/receiving. (What is Voice over IP.)
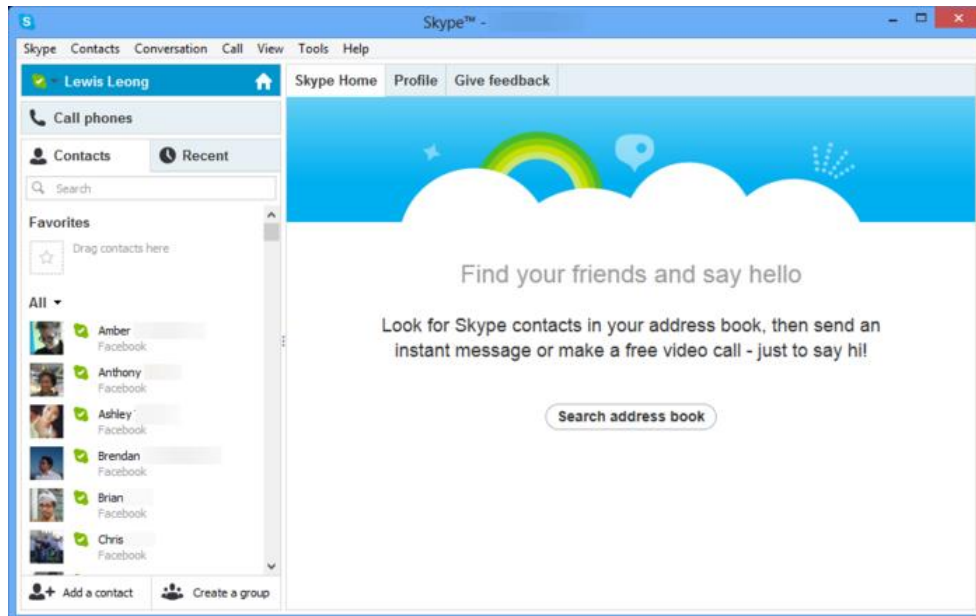
Figure 2: Picture of Skype interface (Skype client interface.)

Online chatting has also been present on mobile phones for a long time in the form of text messages, which send instant messages through the SMSC (Short Message Service Control Channel). In the newer phones, one can find applications such as WhatsApp that send messages through an Internet connection instead. (Hord 2005; WhatsApp.)

2.1 Uses for online chats

There are different uses for online chats ranging from regular chats to business purpose chats. Online chats can also be private chats or chat rooms. Many programs, such as Facebook or online games also have online chats embedded to them as a means to let users converse with each other.

In business, online chats are mostly used in customer service. With online chat it is possible for a company to create a real-time customer support with low costs, which can be used through the company's own website. Online chat-support helps a company in building a solid relationship between the customers, as it is said that the availability of help and the speed of the helping service are often the reasons for customers having a good experience from a company. (Hodigman 2013.)

While there is always a possibility to use phone or email customer service, these have their own detriments. A phone customer service would be ill served compared to online chat for international companies, as they would have to have a service center in all countries it operates in. A phone service center also ramps up the costs much faster than an online chat, needing physical objects such as phones the more calls are made. An email customer service can leave the customer hanging for most of the day before getting an answer to a question. Online chat customer service does not have these problems, as long as there is enough personnel to keep up with the queries. In the end, online chats often offer offline availability by an email or ticket system, making the customers able to contact the company via these channels when there are no personnel online for the chat. (tagove 2015.)

Online chat support in business also leaves logs from conversations with the customers. The company can thus analyze these logs to find out what needs improvement by finding out what customers are complaining about or need help with the most. It is also possible to monitor the length which the support took to overcome an obstacle with the customer. In the long run, this will save time of the customer support team to focus on things that really need their attention. (Hodigman 2013.)

While implementing an online chat support feature to a business has its benefits, it can also have detriments. For example, Evan Hamilton from an eight person startup company UserVoice has said that his company has given up on online chat because it sets high expectations on availability and they just didn't have time and personnel to do it. (Boatman 2011.)

Online chats can also be used for normal chatting between people. There are many dating services using online chats as their base, as well as online chats with chat rooms where people interested in same things can meet up and talk. (Rouse 2005b.)

Usually online chat applications meant for conversation have a system called chat rooms. A chat room is a place for communities with common interests to meet up and talk about them. In chat room, everyone who is participating in it can read the messages sent into the room, and send their own messages as well, creating a place for open discussion on different topics. (Rouse 2005b.)

2.2   Common features

According to the research done in chapter 6.1, the most common features in online chats used for business purposes are:
  – Visitors list

- Notifications
- Offline availability
- Analytics
- Chat history
- Shortcuts
- Operator status
- Operator management
- Appearance modification

For more detailed information on the features for the five online chats tested within this thesis, refer chapter 6.1.

3   Security

Security for users in online chats to be able to have a conversation between themselves without any third party being able to read the conversation. Security in online chats is limited to private chat rooms and private conversations. It would be useless to make a secure public chat room, as anyone can connect into it which makes it unsecure anyways.

3.1   Packet sniffing

The biggest threat to safety within online chats is packet sniffing. Packet sniffing is the act of capturing data that is passed over local network and looking for any information that might prove useful, such as passwords or sensitive information. In online chats, packet sniffing might allow a third party to read private conversation happening within an online chat software. (Hannah 2011.)

There are many software that can do packet sniffing available nowadays. These can be used as an added measure of security, monitoring a network's problems and detecting intrusions or compromised workstations. Tools like Wireshark, Ettercap or NetworkMiner give anybody with the basic knowledge the ability to "sniff" network traffic. (Hannah 2011.)

As most information through Internet runs in plain text, it can be sniffed from the packets that deliver it to its destined recipient. This is why it is important to have some kind of encryption in place, making the information the packets are delivering meaningless to anyone without the proper key to decrypt the information. Encryption is a widely used method to stop packet sniffing, allowing passwords and messages within Internet to go without molestation of third parties. (Hannah 2011.)

3.2 Encryption and decryption of messages

There are two types of encryption: symmetric key- and public key encryption. In symmetric key encryption, the same key is used for encryption and decryption. In public key encryption, there is a key for both encryption and decryption. The encryption key can be openly available while the decryption key is only available for the receiving person. (Tyson 2001.)

The most usual way to obtain secure transaction of messages is to use the public key encryption method. The sender of the message uses the openly available encryption code to encrypt the message, which makes it so that the messages sent can only be deciphered by those who are aware of the decryption code. (Tyson 2001.)

BPMN Flowchart – private chat with encryption
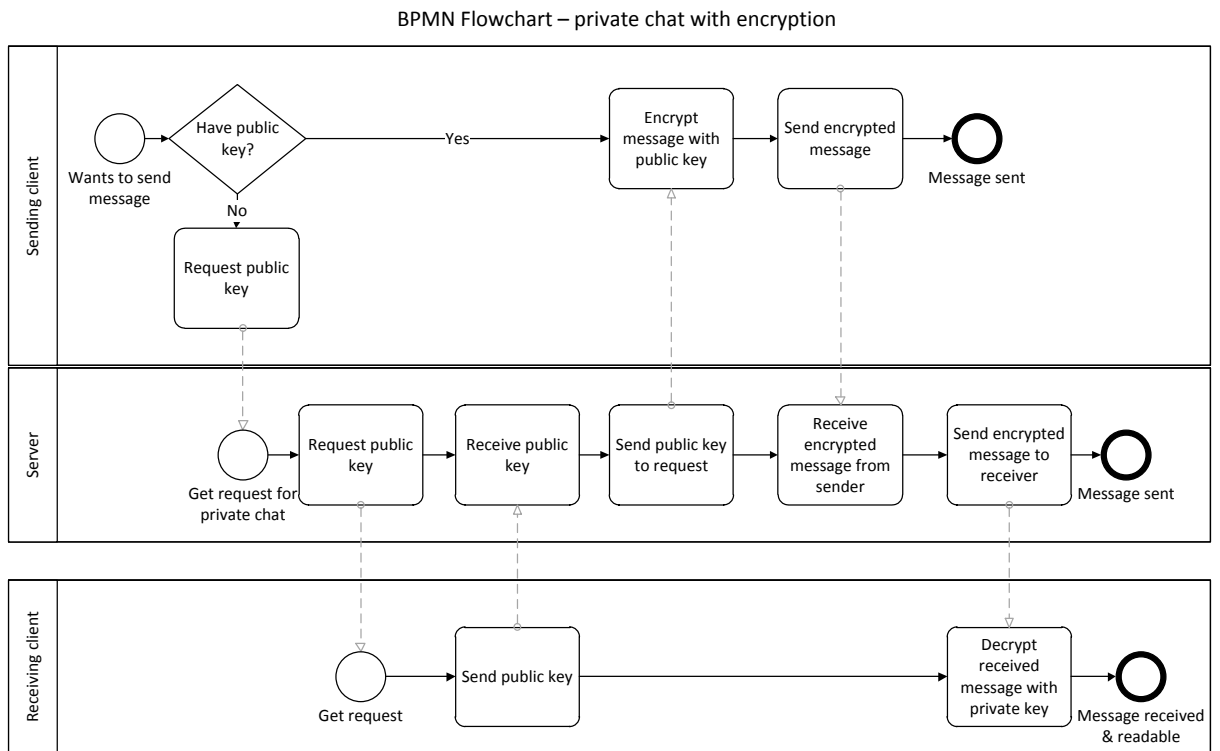
Figure 3: BPMN chart of online chat private chat with encryption

The figure above, Figure 3, shows a Business Process Model and Notation (BPMN) chart of how encryption works when making a private conversation room with another person in chat software that uses public key encryption. First, the sender opens a private chat window. The software client then asks if the sender has the public key needed for sending the message to the receiver. If not, the software client will ask for the public key from the server which handles sending the messages. The server asks for the public key from the receiving client, which sends it to the server. The server then proceeds to send the key to the sender's client, which can then send a message encrypted with the public key of the receiver. The server will receive the message and send it on to the receiving client which then decrypts the message into a readable form with the private key. Thus the private key is only known to the receiver, not even the server knows it. (Tyson 2001.)

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4   Online chat testing

In this thesis, five different online chat software producers were chosen to be tested. Some were chosen as market leaders from Datanyze's graphs, while others were chosen for having unique features. (Datanyze.)

4.1   Chosen software

The software chosen for testing are:

– LiveZhat

– Zopim

– Olark Chat

– LiveChat

– ClickDesk

LiveZhat has been produced by the company Zef. Zef was founded in 1997, but started dealing in online chat software in 2011. The company also develops voting advice application which has of lately made a breakthrough internationally. Zef's headquarters are located in Oulu, Finland. LiveZhat was chosen as the market leader of online chat developers in Finland. (Zef; Tuomikoski 2015.)

Zopim is a company that has been founded in 2008. Zopim has a team of 30 members working on their online chat software, and their headquarters is located in Singapore. Their online chat software was launched in 2010. Zopim was chosen for having the biggest market share out of online chat software targeted for business use according to Datanyze's market share chart. (Zopim Press Kit; Datanyze.)

Olark Chat has been produced by Habla Inc. The company was founded in 2009, and the company headquarters is located in San Francisco, US. Habla has employees across the US, Canada, Brazil and U.K. Olark was chosen for having the second biggest market share according to Datanyze's market share chart. (Olark; Datanyze.)

LiveChat has been created by LiveChatInc. LiveChatInc consists of 50 people. LiveChat was chosen for having the third biggest market share according to Datanyze's market share chart. (LiveChat; Datanyze.)

ClickDesk has created online chat software with normal online chat, VoIP and video chat combined. ClickDesk is a company consisting of around 20 members and their main office is located in Silicon Valley, US. Their software is hosted in Google and Amazon cloud. ClickDesk was chosen for having the VoIP and video chat functionalities. (ClickDesk.)

4.2 Business models needing online chats

Online chats are becoming more and more important in the competition for customers for companies that do their sales via Internet. An online chat is also a good tool for communication via the Internet, and can be used for all kinds of needs to communicate. For example, LiveZhat has implemented their online chat for a church to make it a channel for anonymous conversation with church personnel for religious people. (tagove 2015; Tuomikoski 2015.)

Online chats are used mostly for customer service within webstores. A webstore is a place that sells digital or physical goods through an Internet webpage. An online chat can be used by both business-to-business and business-to-customer based companies for their customer service needs. An online chat software allows these stores that operate within the Internet to have real-time conversations with their customer base. (tagove 2015.)

4.3 Delivery of online chat solutions

The delivery of business-based online chats can be done in different ways. Some offer consultation help and tailored solutions for companies while others offer a packet solution that can be implemented and customized at the customer's end. All companies that are included in this thesis offer the second option, while some of the companies give the option for the first option. (Tuomikoski 2015.)

The implementation process for the software tested in this thesis was simple: register on their page, get the source code for implementation as JavaScript and enter the JavaScript code on a Hypertext Markup Language (HTML) page. After that, customize the features of the online chat to suit whatever is needed on their web chat user interface and the implementation is done. The trial version works for a few weeks, after which subscription payment is needed for continuous use.

5 Implementation and testing

This chapter contains information on the implementation and user experiences of the five chosen online chat software. The software testing was done with trial versions, thus some features that were not openly promoted or available for the trial version might be left out.

5.1 LiveZhat

The first step to implementing LiveZhat is to register on their page. LiveZhat offers a 14 days free trial for their application. When entering the registration page, the view will be as shown in Figure 4.
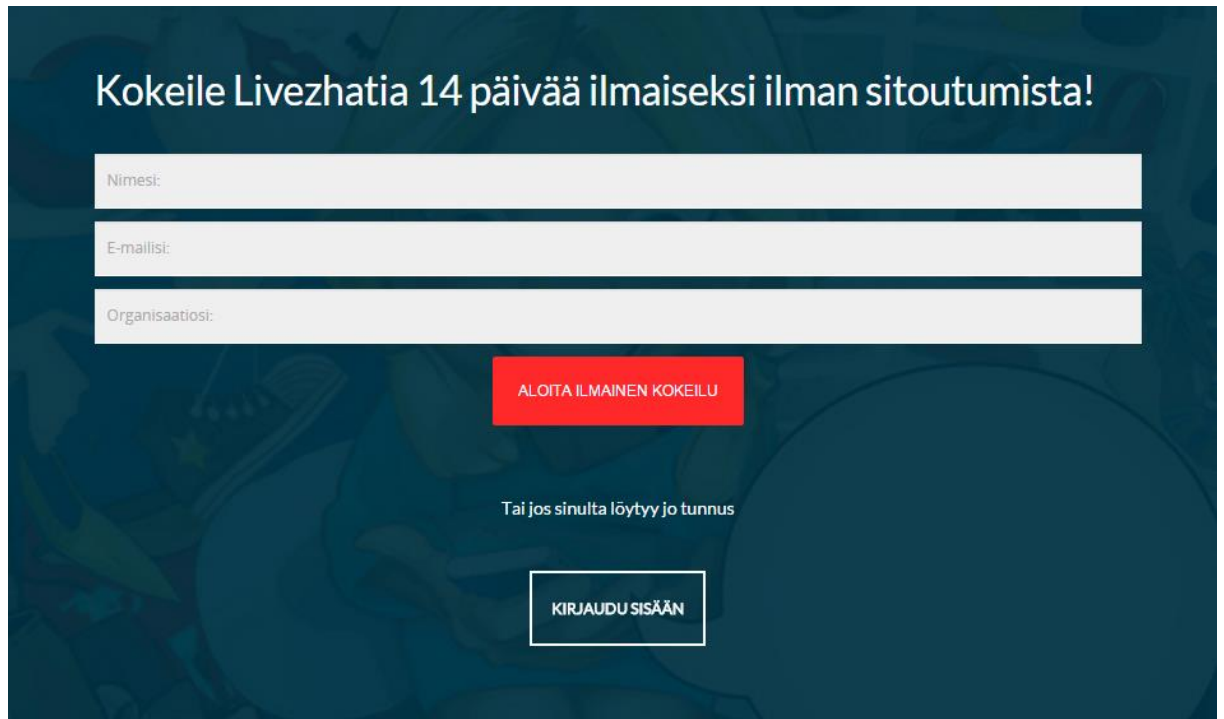

Figure 4: Registration page of LiveZhat (LiveZhat registration.)

Here the page asks to register by entering a name, email and organization. After entering the details, there will be a confirmation email sent, which has an activation link to the account. The activation link logs into LiveZhat, and asks to change password. After changing password, the application will start a short initializing stage, in which the user sets up the LiveZhat account by selecting the theme and welcoming text. The application then gives the code for embedding the chat to a website. The code is JavaScript, and links the website it is embedded to the LiveZhat online chat software and account, while also creating a user interface for the chat on the website it is embedded on.

User roles

In the application, there are three roles: administrator, operator and visitor. Administrators are mostly tasked with the maintenance of the application. Administrator has access to enable and disable all of the functionality in the chat software, customizing the chat for the company's needs. Operators are the people working with the chat, answering to queries from the visitors. An administrator can also work as an operator. Operators can only access selected few settings within the online chat software. Visitors are the people using the online chat application through the website it is embedded to.

Testing

After getting through the implementation setup, the application lands on a tutorial page, with information on what does each part of the user interface do. The application is in Finnish by default, but can be used in English as well. The language can also be decided while logging into the application through LiveZhat's site. The tutorial page can be seen in the Figure 5 below.
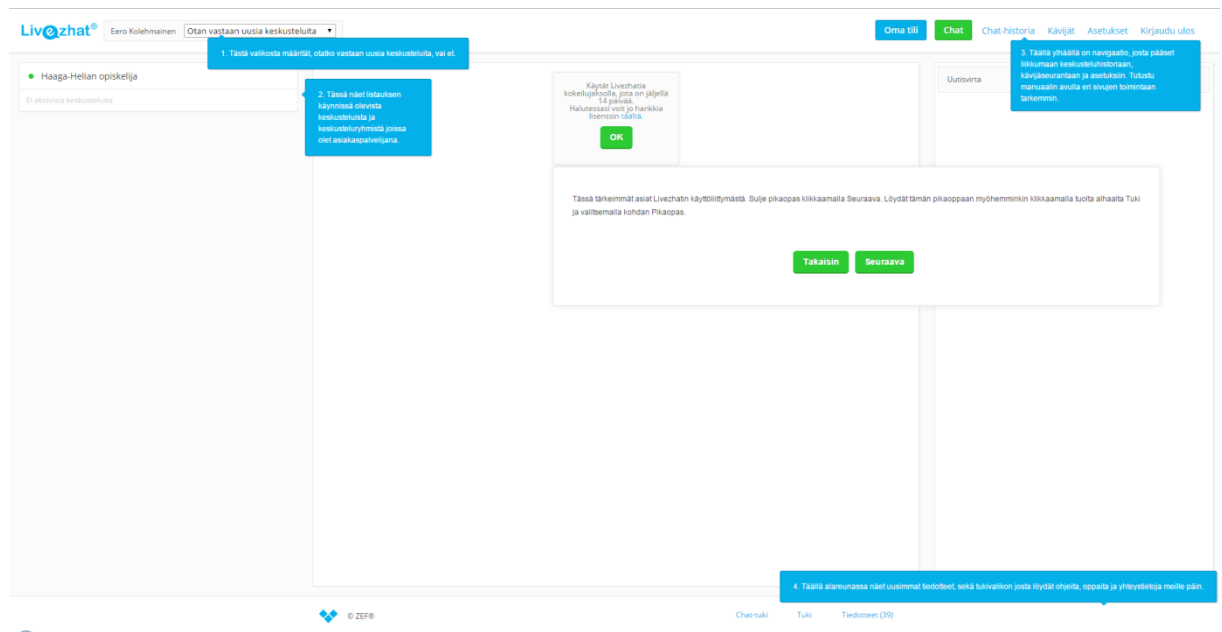

Figure 5: User interface of LiveZhat application (LiveZhat application interface.)

The LiveZhat online chat software has 4 different main pages: Chat, Overview, Visitors and Settings. The Chat page allows operators and administrators to chat with the visitors on the site. On the overview page, one is able to view the chat history and statistics. It is also possible to download chat summary, as well as to view own chat history. The statistics show how many chats have occurred today, yesterday, this week, previous week, this month and previous month. The Figure 6 below shows the chat user interface for operators and administrators.
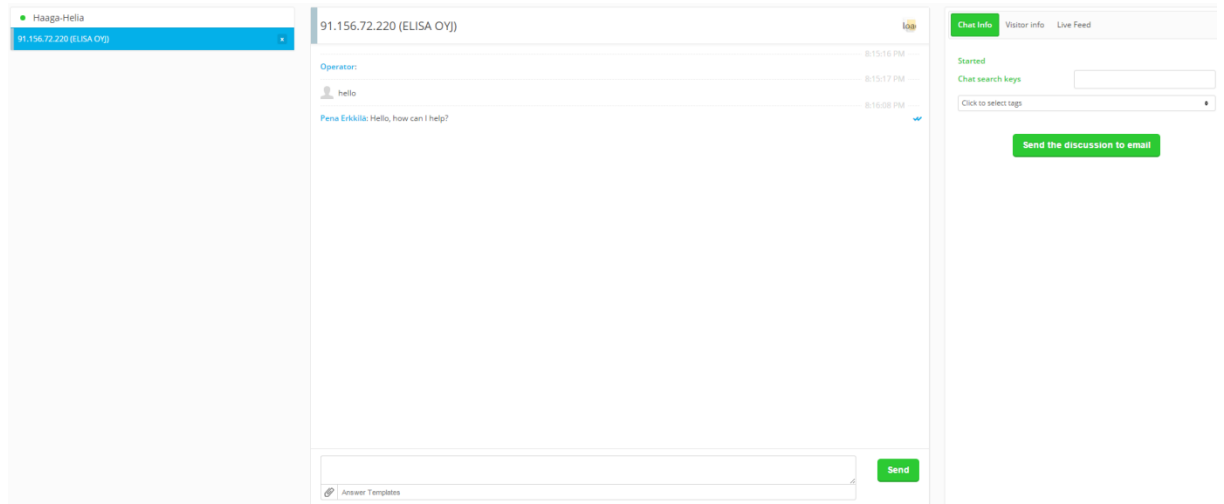
Figure 6: LiveZhat chat user interface for operators and administrators (LiveZhat application interface.)

The chat summary allows downloading a summary of chats ranging from start date to end date, with language selection of Finnish and English. It is possible to download discussion summary, chat status events, operator status events, discussions with messages, chat statistics report, chat state report and operator summary.

On the visitors page the operators can view the list of visitors that are currently on the website the online chat application has been embedded on. It is also possible for an operator to start a chat with a visitor from here.

The settings page has three subcategories, My Settings, General Settings and Organization Settings. The My Settings page is available for both administrator and operator, while the General- and Organizational settings pages are only available for administrator.

On My Settings, it is possible to edit language, time zone, avatar image, password, live feed settings, popup- and sound notifications as well as own user name and department. It is possible to have messages for new discussions, messages, someone starts replying, someone sends a reply, operator opened discussion and to see if operator closed discussion or if visitor closed discussion. On the General Settings page, it is possible to block IP addresses and enter a page where one can preview their chat from visitor perspective.

In the Organization Settings page, it is possible to edit company name, company email, account subscription, add, remove and edit operators and manage departments. The Organization Settings page also has more subpages. The subpages are: set assisting operators, manage chat settings, manage answer templates, manage selectable tags, manage automated answers and create actions and priorities for chat. The assisting

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operators feature lets an operator to be assisting operator, allowing him/her to participate in chats together with other operator.

In the chat settings, it is possible to select how many simultaneous chats one operator can have, allow offline emails, edit the offline email form, allow operators to start chats, allow operators to exclusively handle chats, allow tracking visitors, enable automated answers, select visible visitor information fields, use page title as chat title, enable or disable chat history, allow file sending, set preview customer message on or off, allow operators to send chat transcripts to email, select how many days to keep chats in history, edit welcome text, edit input field text, edit chat bar text and edit automated message to user if operator opens a chat. It is also possible to set up operating times from here. The figure below, Figure 7, shows the default outlook of LiveZhat for visitors.
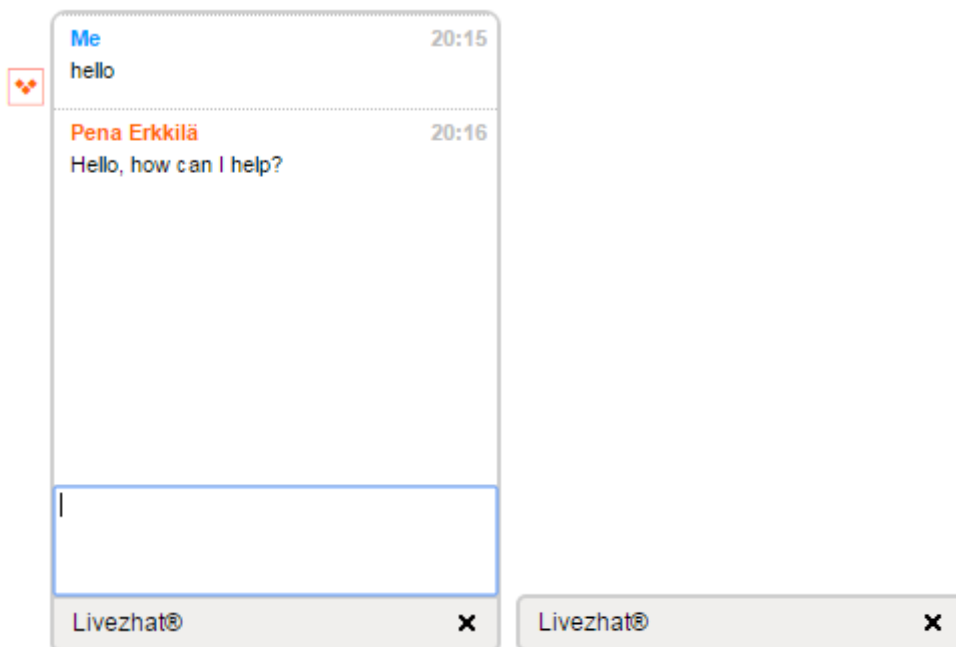

Figure 7: Default outlook of LiveZhat online chat for visitors expanded and minimized (LiveZhat application interface.)

5.2 Zopim

To start implementing Zopim the first thing to do is register on their home page. Zopim offers a free 14 days trial for their online chat application. The registration page is shown below in Figure 8.
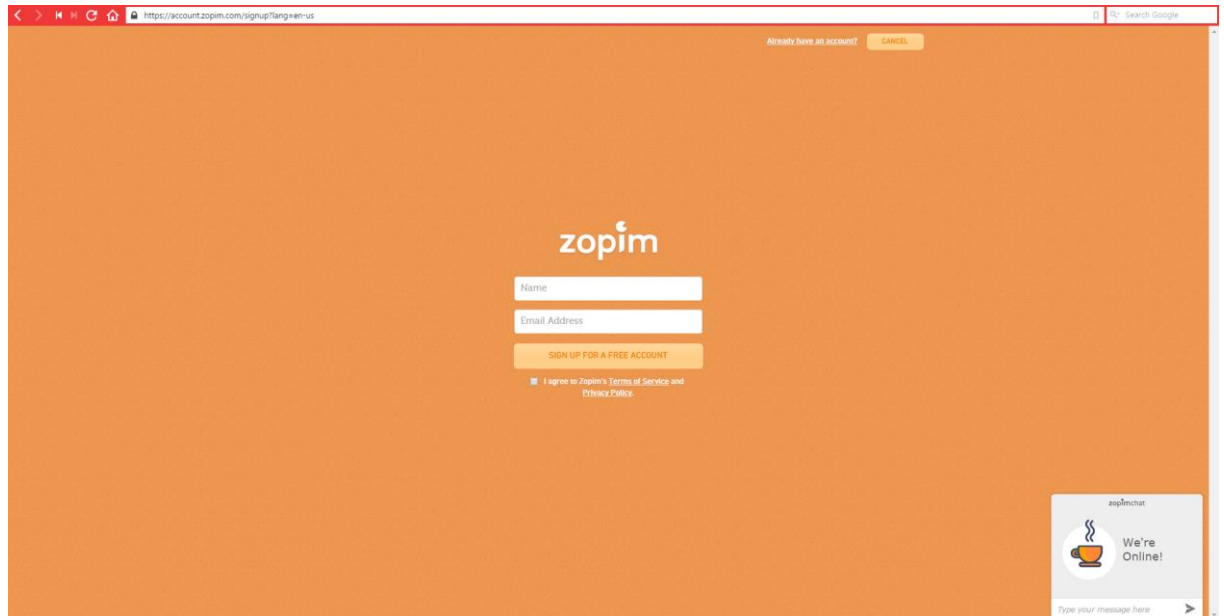
Figure 8: Zopim registration page (Zopim registration.)

The registration page asks for name and email address. After entering the details, the page will send email with an activation link to activate the account. The activation link directs to Zopim's page and logs onto the account, asking to fill in details such as account password, company, number of employees and optionally phone number. After entering the details, there is one more step which is completing the profile. Here the software asks for first name, last name and display name as well as if one wants to receive newsletters on Zopim updates or email notifications on offline messages. After filling in the information, the software gives the JavaScript code for implementing the Zopim web chat into a website. The code can also be found in an email sent after confirming email, as well as from the settings on the Zopim web chat pages.

User roles

There are three roles within the web application: administrator, agent and visitor. Administrators are the super users of the application, while agents are the normal users of the application who answer to visitor's queries by using the chat within the company's web pages. Administrators have full access to all settings within the application, while agents have access to personal settings only. Visitors are the people using the chat on the website that the chat is implemented on. The outlook of the chat for administrators and agents is shown below in Figure 9.
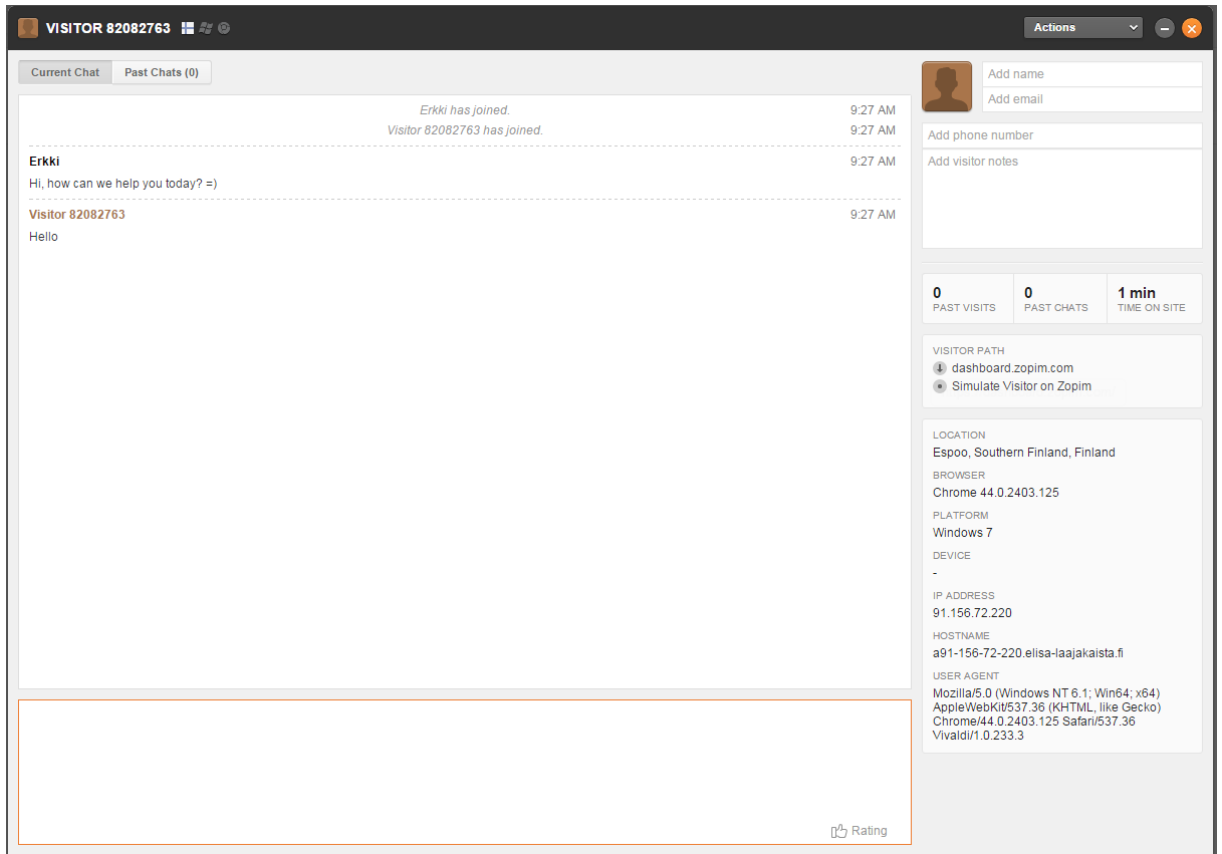
Figure 9: Chat outlook for administrators and agents (Zopim application interface.)

Testing

After completing the registration process, the application will land on the visitor list page. The pages in the application include: Home, Visitors List, Visualization, History, Analytics, Monitor, Agents, Departments, Shortcuts, Banned Visitors, Triggers, Widget, Personal and Account. The Figure 10 below shows the user interface of Zopim online chat application.

Figure 10: Zopim online chat application user interface (Zopim application interface.)

Home is the front page of the application, having some gathered information from the other pages as an overview. Visitors list is for viewing the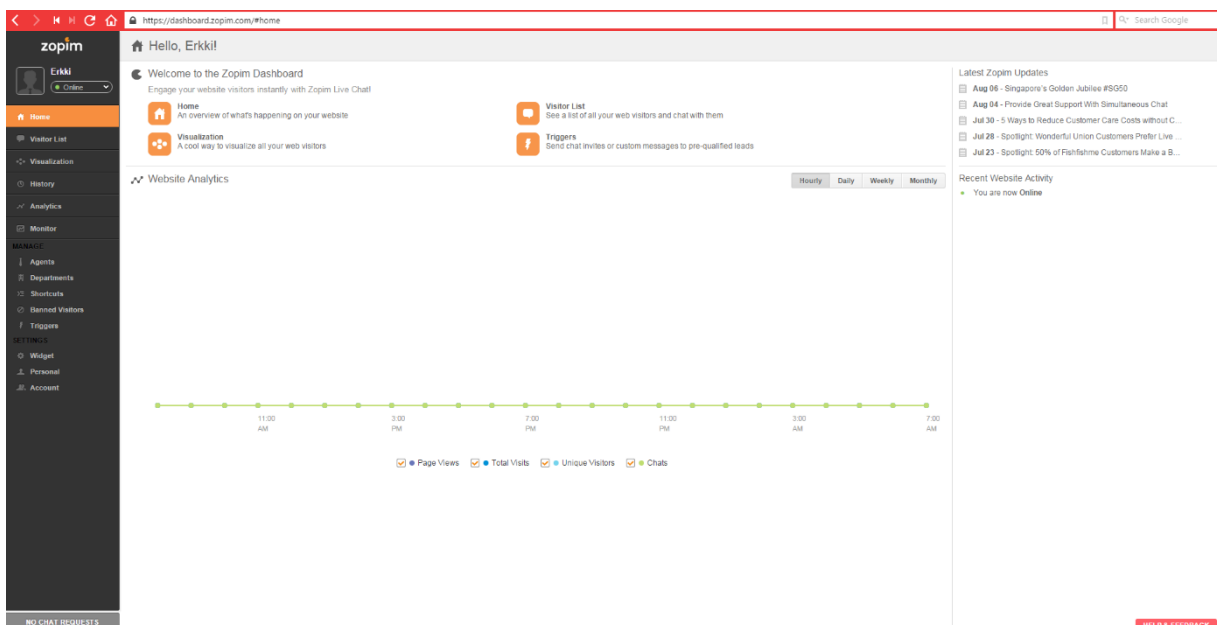 visitors that are using the chat application. Visualization can be used to view visitors in groups, grouped by for example country, page URL or browser. History page shows the history of chats that have occurred on this account. The Analytics page shows information about the chat, for example daily visitors, satisfaction ratings and so on. Monitor page shows real time metrics on current visitor amounts, active chats and chat lengths for one day. The figure below, Figure 11, shows a sample email of weekly analytics report.
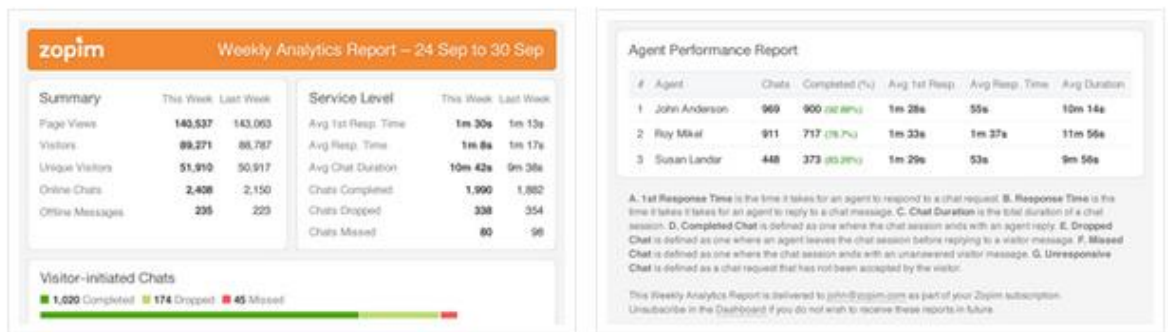

Figure 11: A sample weekly analytics report email (Zopim application interface.)

The Agents page is for managing the agents in the application, while Departments page is for managing departments and adding or removing agents from these departments. Shortcuts page is for editing different shortcuts for chatting, such as writing hi in the chat and getting a longer, more formal message automatically formed from it. On the banned visitors page it is possible to view a list of visitors that have been banned from the chat, and manage the bans. Triggers page lets one manage triggers that for example can automatically respond to visitors if the agent doesn't manage to respond in certain amount of time. Widget, Appearance and account pages are the settings pages for the application.

There are many customizable settings within Zopim. In the Widget page, one can customize the outlook of the chat for visitors. It is possible to edit top title, theme color, window size from small, medium and large as well as widget position from bottom left to bottom right. It is also possible to edit the outlook of the chat before sending a message, by editing the background color, message and image. The software also has offline functionality which can be turned on or off that lets the visitors to leave a message with their email and name attached to it. The default outlook for the chat for visitors is shown below in Figure 12.
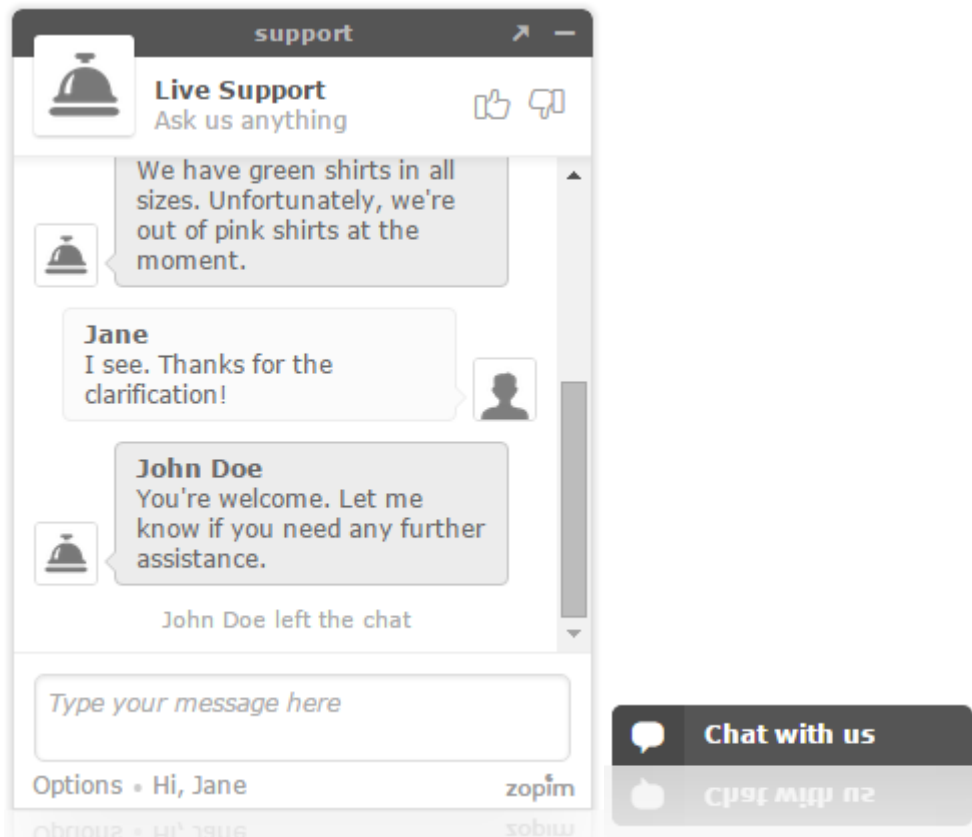
Figure 12: Default outlook of Zopim online chat for visitors expanded and minimized (Zopim application interface.)

It is possible to login into the chat with both Facebook and Google+ account. A visitor can also just set his contact details by writing in name and email. One can also enable a pre-chat form to require visitors to identify themselves or to require a question to be written before the chat starts. There is also a language setting with most of the major languages available, as well as notification sounds for visitors.

The application has a simple system for satisfaction ratings, simply letting visitors to thumb up/down depending on if they felt a chat was helpful or unhelpful. This function can also be turned on or off. It is also possible to hide the chat widget from the visitor until it is triggered by a trigger or from the application user interface.

In the personal settings accessible for both administrators and agents, one can change dashboard language, first name, last name, display name, tagline, login email, password, avatar, and sound notifications. It is also possible to toggle on or off offline message notifications, Zopim updates, idle timeout, email reports and desktop notifications. It is also possible to attach chat panel to right edge of screen.

In account settings one can manage subscription, email piping, file sending, operating hours, time zone, security and visitors list. Email piping allows sending all chat transcripts to an

email specified within the settings. In security it is possible to restrict all logins to the Zopim dashboard to be available only from certain IP addresses. From visitors list settings one can enable high load dashboard, which only shows the visitors that have chat on instead of all visitors on webpage.

Zopim has many tutorial videos available on how the web chat application works. There is a tutorial video on embedding the chat widget, chatting with customers, automatic translations, creating shortcuts, browsing the visitor list, widget customization, creating triggers and agents and department setup.

5.3 Olark Chat

To begin the implementation of Olark Chat, one must first register an account via their website www.olark.com. Olark has a free trial of 14 days for every plan they offer, after which a user can start using their free plan. The free plan has access to limited features and can only have 1 operator and 20 chats per month. The figure below, Figure 13, has information on the plans that Olark offers and their costs.

Figure 13: Olark Chat subscription plans for companies (Olark registration.)

To continue the registration progress, one must select a plan. After selecting plan, the site asks for information on first name, last name, email, username and password. After registering, there is a prompt to embed the Olark Chat into a website using the JavaScript

source code they offer. Once the chat has been embedded to a website, the implementation is done and it is ready to be used.

User roles

In Olark Chat, there are three user roles: Administrator, Operator and Visitor. Administrator is a super user with access to all settings. Administrators can also work in operator's role. Operators are the personnel who work with the online chat on the company's side, answering visitor's queries. Visitors are the people using the online chat application from the website it is embedded on.

Testing experience

Once Olark Chat has been implemented, the application lands on dashboard. The Olark online chat application is divided into two different pages: dashboard and chat. On dashboard, the administrator can edit all of the chat application settings and operators can edit their profile settings. Dashboard consists of four different pages: Settings, Operators, Reports and Transcripts. Olark offers many ways of customization to create a unique chat for a website. The outlook of the dashboard page is shown below in Figure 14.
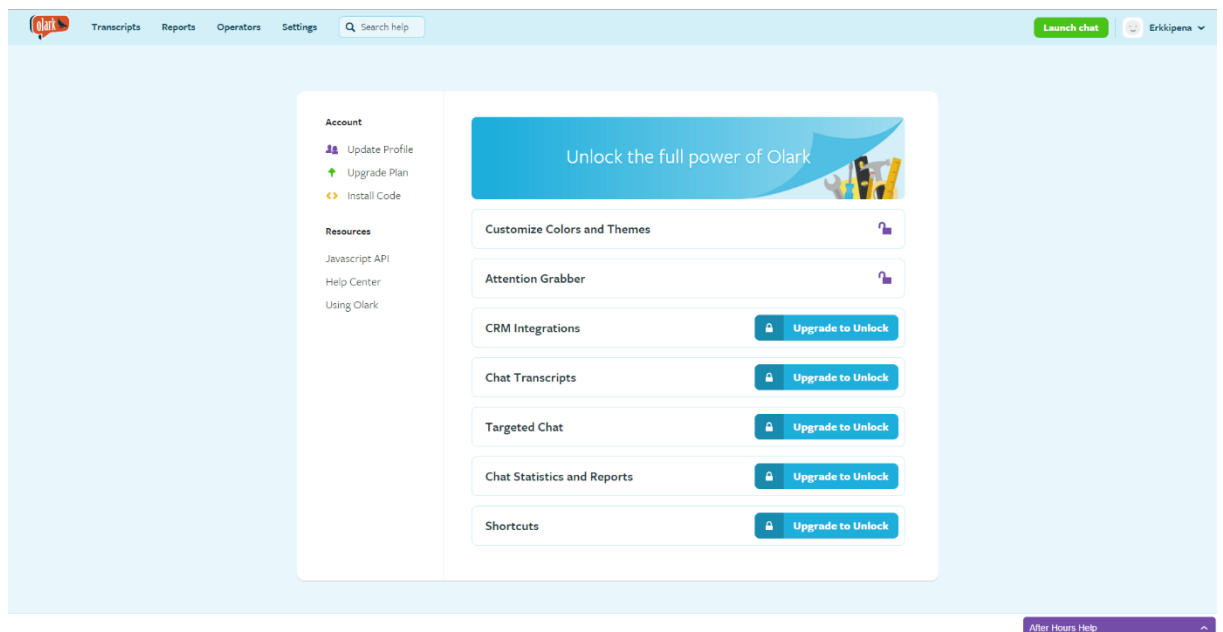
Figure 14: Olark Dashboard user interface (Olark application interface.)

Dashboard

On settings page, it is possible to customize the outlook of Olark Chat within the webpage it has been implemented on. There are five different default themes, and the color theme in these themes can be edited. It is also possible to use a custom CSS to create own theme for the chat. One can also edit the chat welcoming message, chat header, minimized chat header, chat ending message, typing message, stopped typing message and input box

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message. There is also possibility to have a pre-chat survey for the visitor, asking their name, email and phone number. The default appearance of Olark Chat is shown below in Figure 15.
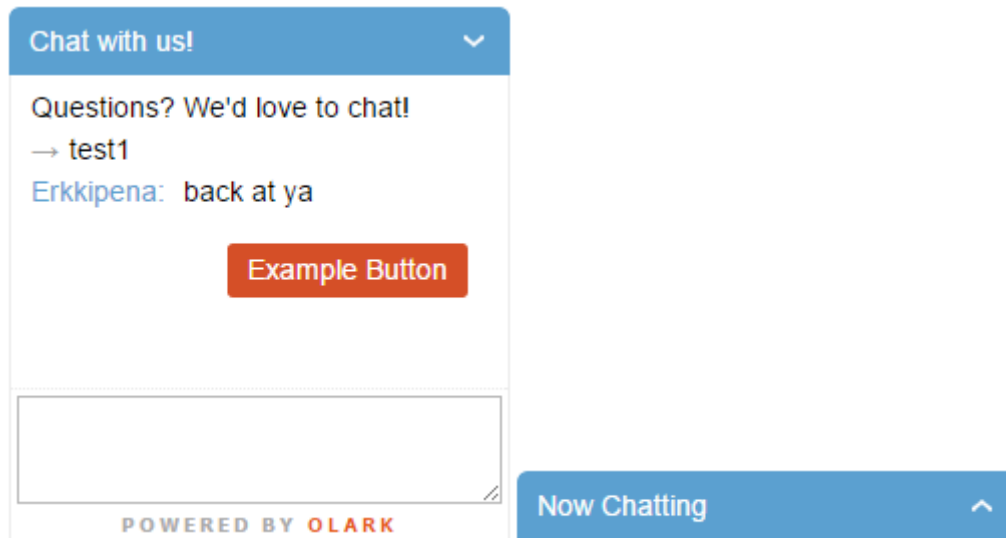
Figure 15: Olark Chat default outlook for visitors expanded and minimized (Olark application interface.)

Olark Chat allows integration with CRMs (Customer Relationship Management) and help desks such as Desk.com, Salesforce, Zendesk, Highrise and Webhooks. There are minor customization features as well. These features include:

-Invisible Olark: only show the chat if an operator initiates a chat with visitor, making visitors unable to initiate chats.

-Start window expanded: allows deciding if chat window should be expanded or minimized at the beginning when visitor enters site.

-Report navigation on the same page: Olark reports changes to the #hash partition of URL.

-Allow chat box to be closed: Allows visitors to close the chat box completely making it disappear.

-Disable visitor information: disables visitor information

-Allow subdomains: allows the chat to expand to subdomains like app.domain.com and www.domain.com

-Allow mobile interface: allows visitors to use the chat when accessing website from mobile devices.

-Chat routing: choose where new chats go to, two options: all operators or round-robin.

-Configure and enable Google Analytics: allows configuring what information Google analytics gathers and disabling/enabling the feature.

There are many extension features within Olark Chat. Targeted chat allows creating rules such as starting a chat with a customer automatically after he/she has viewed 6 different

pages within the website. Attention grabber is a feature that makes minimized online chat more visible for visitors, making a picture pop out from the minimized chat. It is possible to use a premade image or make an own image.

The greeter feature is an automatic response to a visitor if an operator cannot answer the visitors chat within a certain timeframe. Olark Chat also has a feature that allows using the website's own user database to acquire visitor information on a visitor who starts a chat and is logged in. Visitor notifications is a feature that allows a sound to play to a visitor when they receive a message from an operator or when operator starts a chat with them.

There is a feature allowing visitors to give their satisfaction rating on the chat experience from 1 to 5 stars. Co-browsing the website with visitors is also possible with the co-browsing feature, allowing the operators to help the visitors with the use of the website and offer insight on products easily. Shortcuts allow an operator to chat faster with premade messages that trigger from typing for example hi and getting a more formal greeting message.

On operator management page, it is possible to add, delete and edit operators. It is possible to setup display name, user name, email, time zone and operator photo while creating/editing an operator. Also it is possible to make an operator into administrator. Operators are limited to viewing transcripts and operator settings within the dashboard part of the online chat application. Departments are also managed within the Operators page.

On reports page there is information on chat ratings, amount of chats and operator performance. From transcripts page it is possible to view past chat transcripts, allowing reviewing chats.

Chat
The chat page allows the operators to chat with the visitors browsing the website. On chat page, the view shows following: recent conversations, operators, visitors list. In the recent conversations, an operator can see his/her recent conversations with visitors, and view them. The operators tab shows operators that are currently online within the chat part of the Olark Chat application. The visitors list shows the current visitors browsing the website the Olark Chat application is linked to. The figure below, Figure 16, shows the chat user interface for operators.
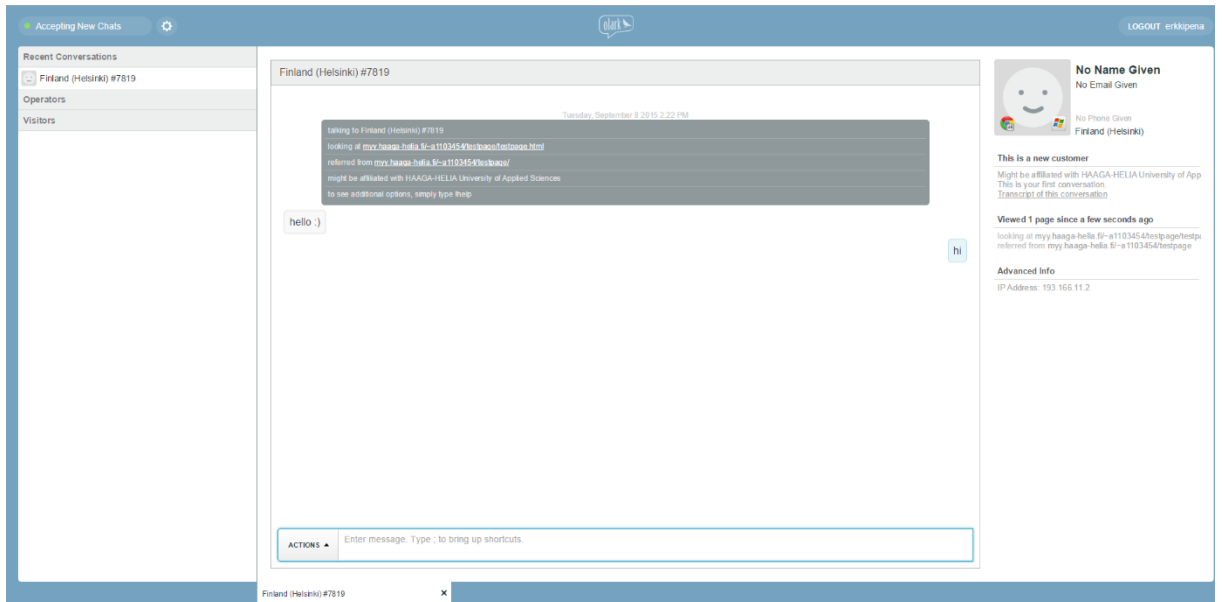
Figure 16: Olark chat user interface for operators and administrators (Olark application interface.)

It is also possible to edit some preferences within the chat page. Operator can turn alert sounds, commands/shortcuts and notifications on or off. An operator may also switch their status to accepting new chats or not accepting new chats.

5.4 LiveChat

To implement LiveChat, the first thing needed is registering to their webpage at www.livechatinc.com/signup. On the page, the only thing asked is an email. After entering an email and clicking sign up for free, there is more information to be filled. The next page asks for full name and password. After entering the information needed, the next page asks for website address and to choose the main goal. There are three options: sales, support or I don't know. After this, the site asks for the industry, number of employees and a phone number. The phone number is optional. After filling the information, the registration is complete. The registration page is shown below in Figure 17.

Figure 17: LiveChat registration page (LiveChat registration.)

After completing the registration, the next thing is to implement the online chat application on a website. The application offers the JavaScript code for implementation. Once the JavaScript code has been embedded into a website, the implementation is complete.

User Roles

In LiveChat, there are three user roles: administrator, agent and visitor. The administrator is a super user within the application, having access to all features and customization options. The agent is a person working on the company side on the chat, answering queries by visitors. The agent has access to personal settings. A visitor is a user who is browsing the website that the online chat is implemented on and using the online chat feature in there. The agent's and administrator's user interface for the chat can be seen in the Figure 18 below.
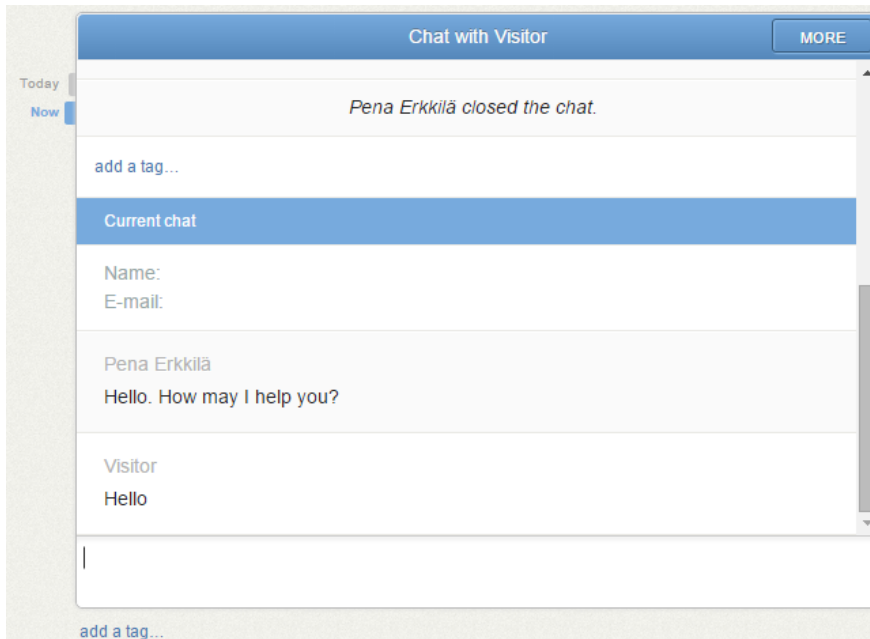
Figure 18: LiveChat chat interface for agents and administrators (LiveChat application interface.)

Testing

After the implementation is complete, the LiveChat online chat application lands on chats page. The application has seven pages: Chats, Visitors, Archives, Tickets, Agents, Reports and Settings. On chats page, an operator or administrator can view currently open chats. On the visitor's page, it is possible to view the visitors list on the website the application is embedded to. The figure below, Figure 19, shows the user interface of LiveChat online chat application.
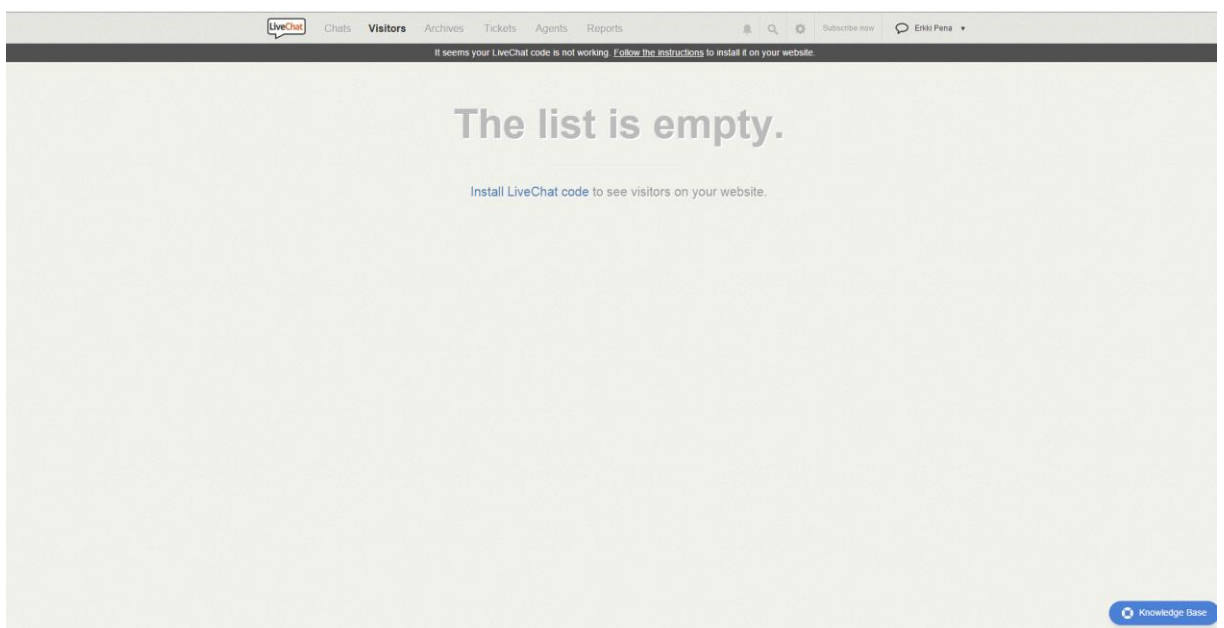
Figure 19: LiveChat user interface (LiveChat application interface.)

The Archives page has history of all the chats that have occurred within the application. Tickets page is for tickets created by operators and visitors. The Agents page is for managing agents within the application. An administrator can add, edit and delete agents here. It is also possible to manage groups within this page. On the reports page, there is various information on the chat performance with satisfaction ratings, total chats, amount of new tickets created and so on.

Customizing the chat is possible within the settings page. The chat window for visitors can be customized in many ways. There are four default themes available for the chat, and the colors for these themes can be edited. It is also possible to create and upload a CSS file for a customized theme. The application   n also allows adding Google+, Facebook and Twitter buttons for likes and shares. Also, disabling logo and agent avatar picture and showing a mobile device logo if agent is using a mobile device is possible. The LiveChat online chat application also has a mobile view for the visitors as well as agents, thus making it possible to be used with mobile devices. Below the Figure 20 shows the default outlook of the chat for visitors.
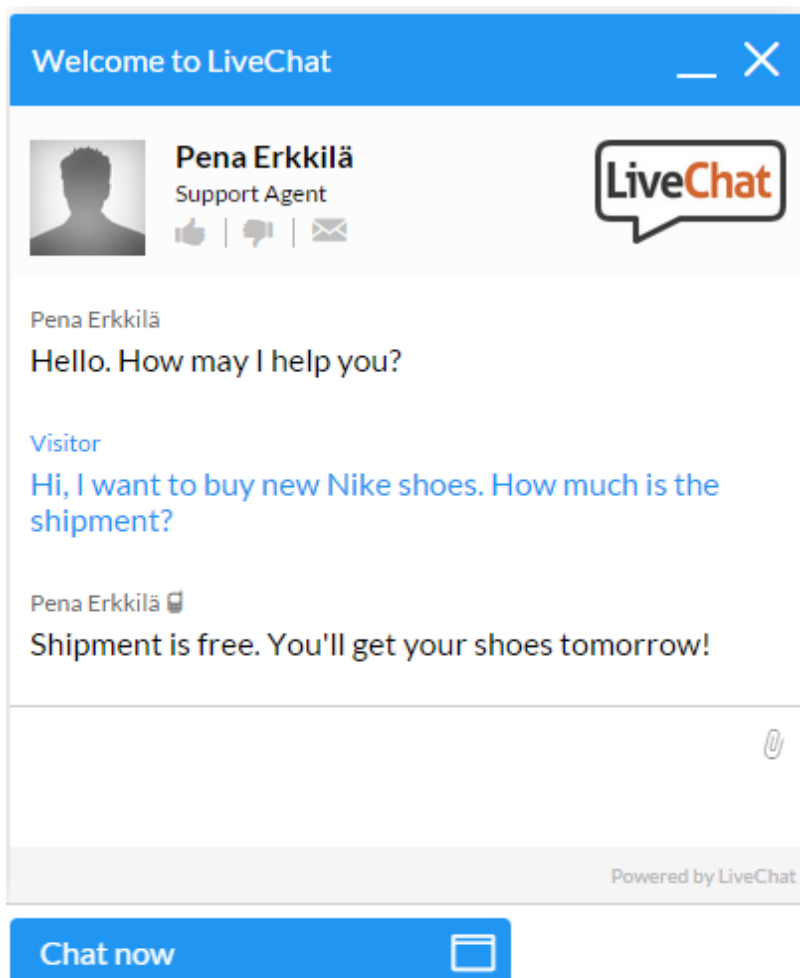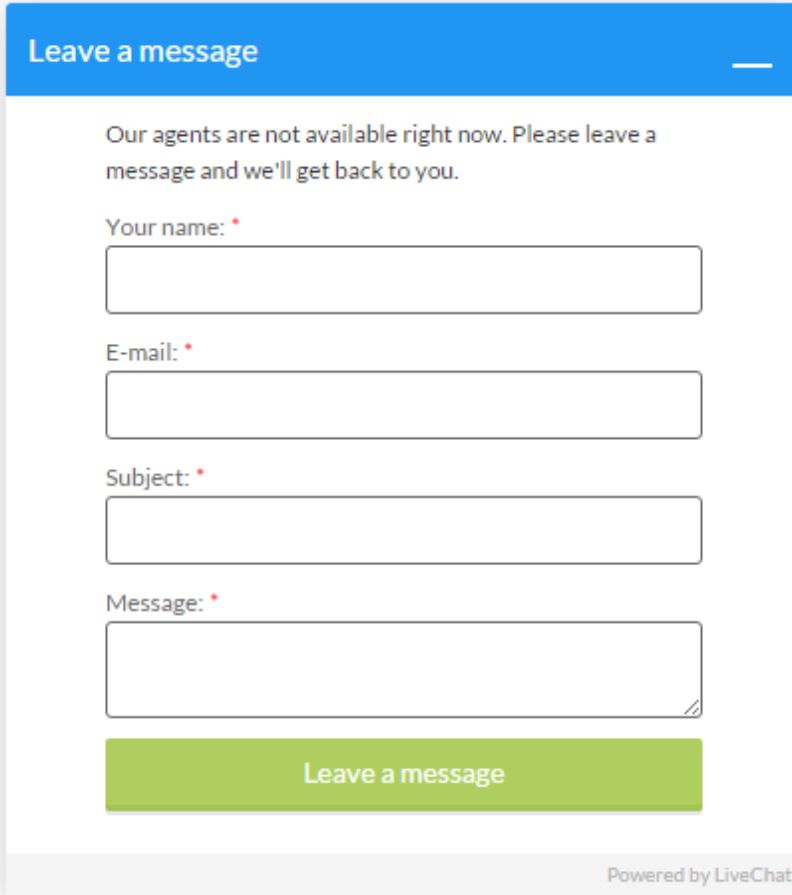
Figure 20: Default outlook for LiveChat online chat expanded and minimized for visitors (LiveChat application interface.)

The application has triggered messages, which trigger for example from specific pages or visitors from specific countries. There is also an eye-catcher feature that allows the minimized chat box to have a picture that makes it more visible to visitors.

In the application it is possible to enable a pre-chat survey, which asks for visitors name and email when the visitor starts the chat. The feature can be expanded to ask for question from visitor or a choice list for question. It is also possible to allow login with a Facebook account. There is also a feature for post-chat survey, which allows visitor to send additional feedback after the chat is over.

If all agents that are currently active have maximum number of chats open, there is a feature that puts the visitors in queue. If there are no agents online, a visitor can leave a message as a ticket for the agents to solve after they return. The ticket form asks for name, email, subject and a message. Additionally the form can be made to have a question field as well as choice lists. The figure below, Figure 21, shows the default outlook of ticket form.

Figure 21: Default outlook of ticket form (LiveChat application interface.)

There are also many helpful features in the application. The shortcuts feature is very helpful for agents, making typing messages much easier. For example, there can be a shortcut that

when typing hi will bring out a more formal and longer greeting message. Agents can also create tags for tickets, tagging tickets to for example being complaint or positive feedback. The tags can be modified to the users liking by administrators. The application also has keyboard shortcuts for showing previous chat window, showing next chat window, showing first chat window, closing chat window, picking first visitor from queue, adding a tag, focusing on search bar and displaying keyboard shortcuts.

LiveChatInc also has a desktop application for Windows and Mac as well as a mobile application for Android, IPhone and IPad. The application can be useful as it can automatically start with operating system, automatically login and has its own notification system for new messages.

LiveChat online chat application offers a feature that lets support emails to come to the online chat application as tickets. It is also possible to get messages and posts from Facebook page as tickets in the online chat application. It is possible to forward all chat transcripts into an email as well.

LiveChat allows visitors to send files to agents and vice versa. It is also possible to enable only one way sending for both parties, making it so only visitors can send files to agents or only agents can send files to visitors. The files that are sent are sent to LiveChatInc's servers, from which the other party can access or download the file.

Inactivity timeouts is a feature that does something automatically, for example transfers a chat from one agent to another, when certain time period of agent inactivity has been passed. It is possible to: transfer chat to another agent, make the chat inactive and close the chat using inactivity timeouts. The time can be set in minutes.

It is possible to send automated emails to visitors for leaving a ticket as well as a ticket rating request after the visitor's ticket has been solved. It is also possible to integrate applications to LiveChat online chat application, as well as create webhooks. A webhook is a piece of information sent from the online chat application to the web server that it is implemented on.

The LiveChat online chat application has a possibility of using Google's two-step authentication. To use the Google two-step authentication, one must link a Google account to the existing LiveChat account. Enabling the two-step authentication forces logging in with the Google account that was linked for the LiveChat account. The two-step login works so that one must first login to his/her Google account, after which a text message is sent to the phone registered with the account which contains a code that must be entered for the login to be successful.

5.5 ClickDesk

To start implementing ClickDesk, the first thing to do is to go to their register page at www.clickdesk.com/register. The registration page asks for the following information: name, email and password. After entering the information and agreeing to terms, pressing sign up sends a confirmation link to the email entered. After clicking the link within the confirmation email, the registration of the account is complete. The figure below, Figure 22, shows the outlook of the registration page.

Figure 22: ClickDesk registration form (ClickDesk registration.)

After completing the registration and logging in, the application prompts to implement the JavaScript code for the chat into a website. Once the JavaScript has been implemented to a website, the implementation of the chat application is complete.

User roles

In ClickDesk online chat application, there are three user roles: administrator/owner, agent and visitor. In ClickDesk there can only be one administrator. The administrator is the one who made the ClickDesk account. The administrator is a super user within the application, with access to all features and settings. The administrator can also work in the agent's role. The agent is the user of the application, answering to queries from the visitors. An Agent has

limited access to settings within the application. The visitor is a user from the website that the online chat application has been implemented on, looking for customer support.

Testing

After the implementation is complete, the ClickDesk online chat application lands on dashboard page. The application is divided to two different views: administrator view and agent view.

Administrator view

The administrator view has 13 pages that are under three categories: Main, Live Chat and Help Desk. Under Main category there is Dashboard, Agents and Departments & Code. Under Live Chat category there is User Interface, Settings, Forms & Localization, Reports and Spy. The rest under Help Desk category are Setup, Macros, Automations, Settings and Help Desk Reports. The Figure 23 below shows the user interface of the administrator view of ClickDesk online chat application.
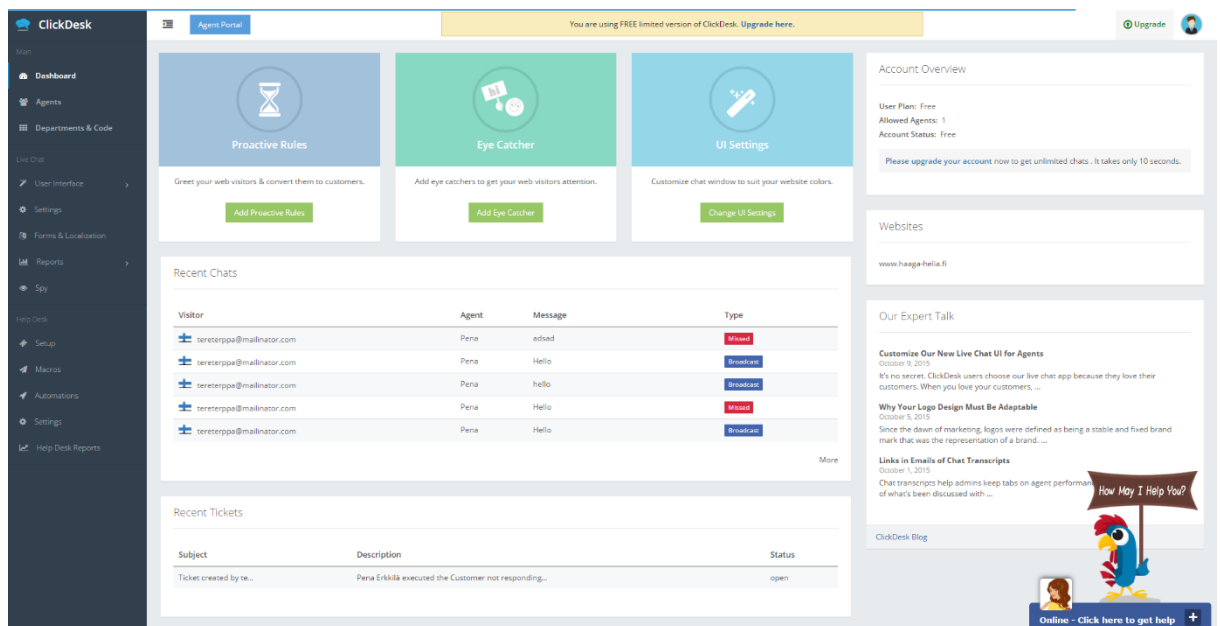
Figure 23: ClickDesk administrator view user interface (ClickDesk application interface.)

The Dashboard page has various information. There is information on weekly reports, recent chats, account overview, websites the application has been implemented on and the latest ClickDesk blog entries.

On the Agents page, the administrator of the online chat application can manage the workers within the site. It is possible to view agent data, edit agent data, add new agents and delete old agents. The administrator can edit an agent's profile as well as the agent's privileges. In

the privileges, it is possible to set agent's level from 1 to 3, prioritizing the agent for incoming chats, set the amount of simultaneous chats the agent can have, enable voice and video calls for the agent and allow the agent to edit their profile picture, name, nick name and password.

On the departments and code page it is possible to add new departments, delete old ones and add new agents to currently existing departments. Every department has different implementation code, making it possible to have different departments answer to queries from different pages within the website that the online chat application has been implemented on.

The user interface page has 6 subpages. On chat widget page, one can edit their online chat's outlook to the visitors, by selecting from five different themes, changing the color of user interface, changing position from bottom left to bottom right, and changing the avatar on the online chat's user interface. One can also enable or disable mobile device optimized chat. The Figure 24 below shows the default outlook of the chat as expanded and minimized for visitors.
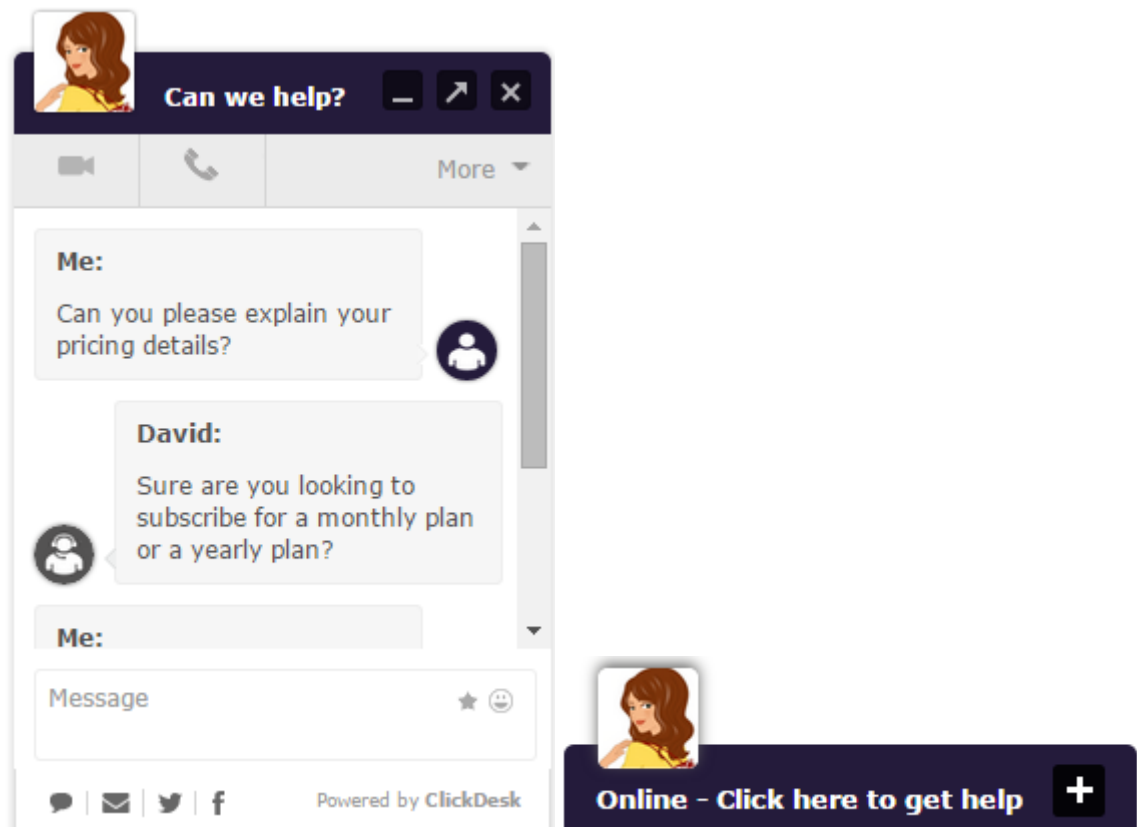
Figure 24: Default outlook of the ClickDesk online chat for visitors expanded and minimized (ClickDesk application interface.)

The minimized chat can also be modified, and has two different outlooks depending on if there are agents online or not. On the online bar settings, one can edit the outlook of the minimized chat when agents are online. One can edit the text on the minimized bar, add a transition effect when expanding the chat, add an customizable eye catcher to the minimized chat and change the text shown in the bar for mobile device visitors if mobile view is enabled. The offline bar settings, which shows up when no agents are online, has the same options for customization.

It is also possible to add an image or a text link that opens the chat for visitors. In custom images settings, one can upload a picture and get the code for the custom image feature as well as copy a text link code to their page. There is also code available for hiding the chat before the visitor presses on an image or text link to open the chat.

The white label can also be edited if the account is subscribed. One can edit the company name, website URL and logo within the white label. It is also possible to hide branding. In the final page, Advanced Settings, it is possible to create a custom CSS for the chat application, allowing full customization of user interface on the visitor side. It can also be edited to look different for each department.

On Settings page, it is possible to edit chat triggers, shortcuts, application integrations, knowledge base integrations, queue settings, sound alerts, ClickDesk application programming interface key, social integrations and miscellaneous settings. In miscellaneous settings, one can enable of disable forced chat to specific agent.

The Forms & Localization page allows one to edit the text within offline and online forms as well as the fields that are included within the forms. It is also possible to enable or disable a chat transcript form, asking the visitor if he/she wants a transcript of the chat that occurred as email. There is also a ticket form for the visitor to send out a support ticket to the online chat software. It is also possible to edit system messages and enable or disable post chat survey for feedback within forms and localization page.

The Reports page has five subpages: Chats Overview, Chat Reports, Chat Transcripts, Advanced Reports and Survey Reports. The Chats Overview page allows the administrator to see chat activity by time of day, how many chats had to be queued, how many chats were missed and how many offline chats occurred when all agents were offline. It is also possible to view chats by country or by URL where the chat was activated.

The Chat Reports page allows viewing weekly chats, daily chats, hourly chats, chat duration, chat lines, response time and missed chats. The chat lines shows how many lines on

average the chat took. The Chat Transcripts page shows history of all chats, allowing to view an occurred chat.

The Advanced reports page allows viewing agent's activity, agent's performance, agent's activity as a chart, chats by country and chats by URL. In Survey Reports page it is possible to view the chat surveys that visitors have sent if chat surveys is enabled within the online chat software. On all of the Reports subpages, it is possible to sort out the content by agents and departments and to select a timeframe for the chats that are shown.

On the Spy page, the administrator can see the agents that are currently online and how they are performing. The spy page shows how many chats the agent has answered to, has active and how many chats the agent has missed during the agent's current session.

On the Setup page under the Help Desk category, one can find forward links which can be used to forward messages from a support email to the online chat software. On Macros page it is possible to create macros that can be used by agents for automated messages regarding support tickets. On Automation page it is possible to create automated messages, for example an automated message to the visitor that his/her ticket has been created.

On the Settings page under Help Desk it is possible to edit help desk settings. It is possible to set up department specific support tickets, canned responses, email template, sender details and help desk permissions. Canned responses are premade responses that can be used by agents when handling a support ticket.

In the Help Desk Reports page, the administrator can view daily tickets, hourly tickets, SLA report, ticket priority, ticket status and weekly tickets. The SLA report shows how long it takes on average to solve a ticket with timeframes: <2 hours, 2-6 hours, 6-12 hours, 12-24 hours, 1-2 days, 2-3 days, 3-4 days, 4-5 days, 5-7 days, 7-10 days, 10-14 days and >14 days. In ticket status it is possible to view the percentages of solved, new and open tickets.

Agent view

The agent view has 10 pages that are under two categories: Main and Settings. Under the Main category, there is Live Chat, Help Desk and Website Visitors. The rest under Settings category are Agent Profile, Shortcuts, Preferences, Theme Settings, Blocked Visitors, Help Desk Filters and Old Chat Details. The Figure 25 below shows the user interface of agent view in ClickDesk online chat application.
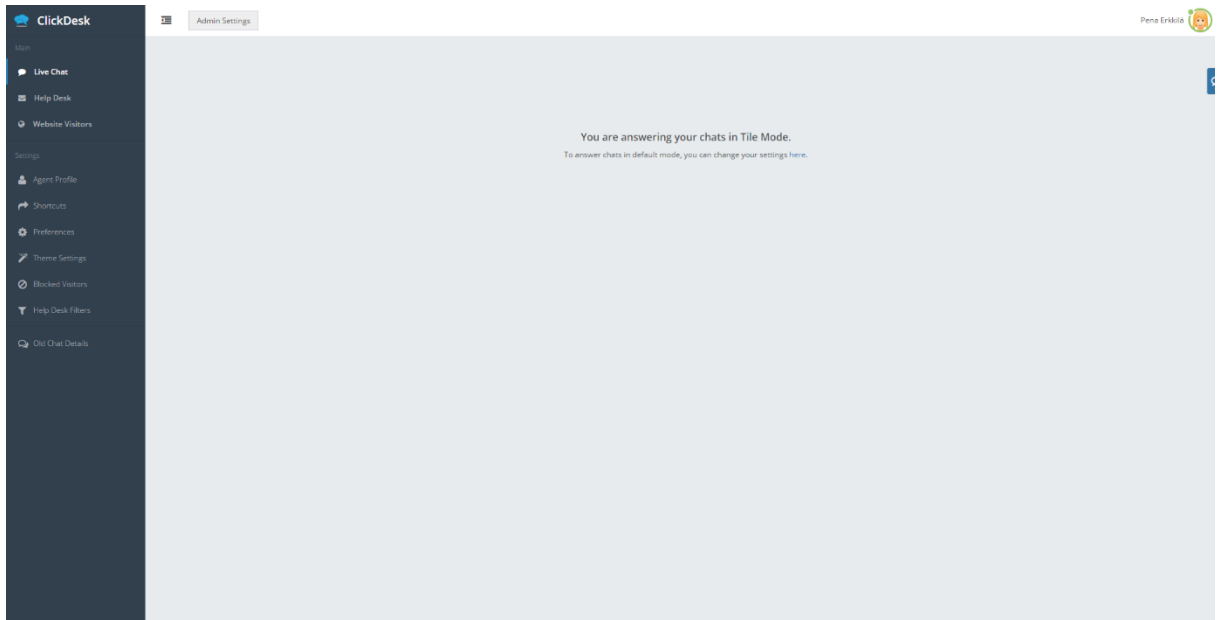
Figure 25: ClickDesk agent view user interface (ClickDesk application interface.)

In the Live Chat page, the agents can view their open chats and chat with the visitors. The figure below, Figure 26, shows the outlook of the ClickDesk chat user interface for agents.
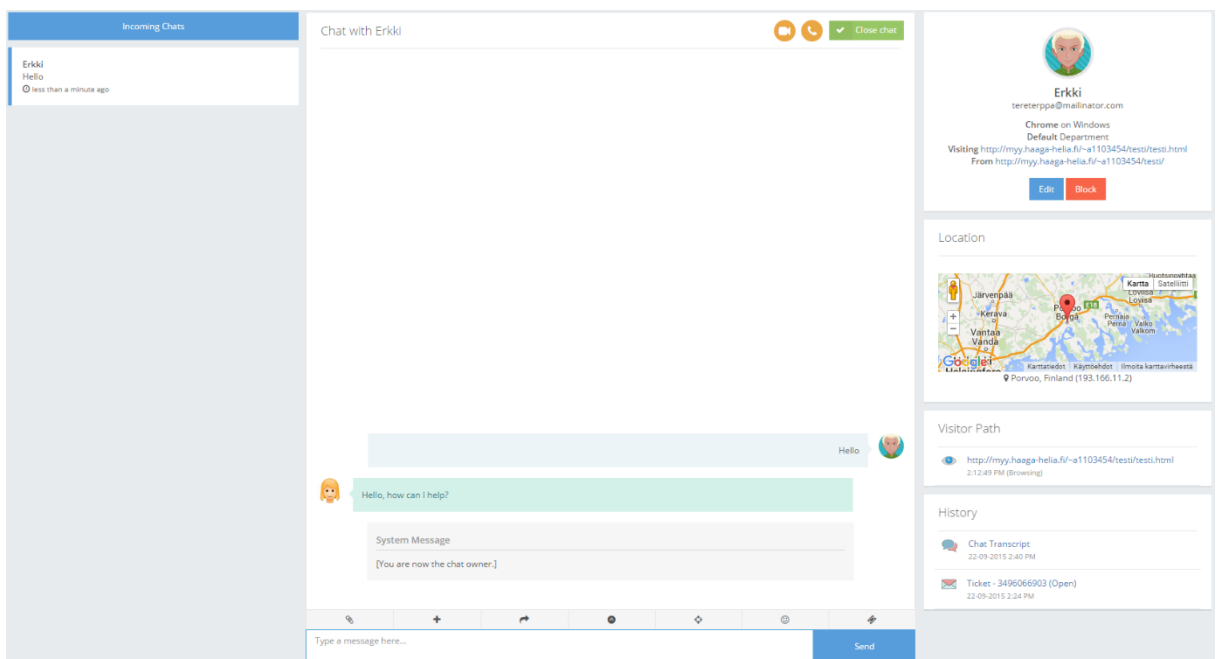
Figure 26 ClickDesk online chat default user interface for agents (ClickDesk application interface.)

Help Desk page allows an agent to view tickets created by visitors. The tickets can be viewed by department and it is possible to search for tickets by using keywords. It is also possible to view the tickets using filters. An agent can create his/her own filters to view tickets with.

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The Website Visitors page shows the list of visitors currently browsing the website that the online chat application has been integrated on. An agent can initiate a chat with a visitor through the list. It is also possible to view the visitor's country, browser and operating system through the list, as well as the URL of the page that visitor is currently browsing and URL where the visitor has come from.

Under the Settings category, on the Agent Profile page the agent can edit his/her profile information. An agent can edit his/her name, display name, email, password and avatar. In the Shortcuts page an agent can create shortcuts that can be used while chatting with visitors to create more complicated messages from short messages.

The Preferences page allows the agent to edit time zone, sound notifications, message notifications (pop-up notifications) and help desk default message. There are also advanced settings in the Preferences page, in which it is possible to select language, have an automatic logout after certain idle time or missed chats, change chat mode, and have an idle time warning. There are two available chat modes: default and tile, allowing the agent to customize his/her chat view. In the Themes Settings page an agent can also customize the colors of the user interface by selecting from 36 different color themes.

The Blocked Visitors page shows visitors that have been banned from using the chat application. It is also possible to remove the ban from this page. The Help Desk Filters page allows management of the filters within the Help Desk page. Old Chat Details page allows the agent to view his/her occurred chat history.

6   Research findings

The five online chats that were tested in this thesis were all different from each other. Some had better user interface, while some had more features than the others. There was also a set of core features that every software had. It is important to note that the software tested are not by any margin the only online chat software available within the Internet, there are tons of more online chat software available.

6.1   Summary of features

There are many different features in online chats, such as emoticons, VoIP chat, share buttons, feedback buttons and chat history. Some online chats have different features enabled than others, and not all online chats are the same. Below is a table on what kind of features the 5 selected online chats have, which gives a good outlook on how they differ from each other in other ways than the user interface.

Table 1: Summary of features. The table can also be found in attachments as an excel file.

Number	Feature	Zopim	LiveZhat	Olark	LiveChat	ClickDesk
1	Operator status	x	x	x	x	x
2	Visitor information	x	x	x	x	x
3	Chat History	x	x	x	x	x
4	Analytics	x	x	x	x	x
5	Operator management	x	x	x	x	x
6	Department management	x		x	x	x
7	Chat shortcuts	x	x	x	x	x
8	Ban visitors	x	x		x	x
9	Chat triggers	x	x	x	x	x
10	Appearance modification	x	x	x	x	x
11	Offline availability	x	x	x	x	x
12	Language selection	x	x		x	x
13	User satisfaction ratings	x		x	x	x
14	Chat window triggers	x		x	x	
15	Operator avatar pictures	x	x	x	x	x
16	Sound notifications	x	x	x	x	x
17	Desktop notifications	x	x	x	x	x
18	File sending	x	x		x	
19	Operating hours	x	x			
20	Timezone	x	x	x		x
21	Operator IP access restriciton	x				
22	Chat testing	x	x		x	
23	Visitors list	x	x	x	x	x
24	Chat between operators		x			
25	Emoticons		x			x
26	Assisting operators		x			
27	Operator chat starting		x	x	x	x
28	Preview user message		x		x	x
29	Subdomains			x		
30	Mobile interface			x	x	
31	Targeted chatting			x		
32	Chat eye-catcher			x	x	x
33	User recognization			x		
34	Cobrowsing with users			x		
35	Desktop application				x	
36	Transfer chat to another operator				x	
37	Tickets for unresolved chats				x	x
38	Search functionality				x	x
39	Pre-chat survey			x	x	x
40	Post-chat survey message				x	x
41	Visitor queue				x	x
42	Tags for chats from operators				x	
43	Keyboard shortcuts				x	
44	Mobile application				x	x
45	Forward support emails				x	
46	Facebook messages and posts as tickets				x	
47	Forward chat history to email				x	
48	Inactivity timeouts				x	
49	Application integrations			x	x	x
50	Webhooks				x	
51	Google 2-step verification for operators				x	
52	Maximum operator chats open				x	
53	Automatic logout					x
54	Theme customization					x
55	Voice chat					x
56	Video chat					x
57	Browser extensions				x	x

List explaining each feature in detail (the excel table in attachments has this information as well):

1. Operator can set his status to for example away or offline

2. Shows information on the user currently chatting, for example IP, country, browser used, OS etc.

3. Show history of all chats that have occurred on this online chat account

4. Application analytics, information on for example daily chats, chats per operator etc.

5. Allows the management of operators/agents in the application

6. Manage operators into different departments

7. Shortcuts to chatting for example writing Hi would bring out Hello, how may I help

8. Ban users from the online chat

9. For example if a new chat is not answered to within 1 minute, a trigger can automatically answer the chat

10. Modifying the appearance of the online chat for users

11. Availability in offline mode

12. Selecting which language the online chat software is presented in.

13. Allows users to select if the chatting experience was good or bad at the end of the chat

14. Pops out the chat window if certain conditions are met

15. Allows operator to put his picture to be shown within the chat for the user

16. The online chat application can send out a sound to notify of new messages etc.

17. The online chat application can send a notification to the browser which notifies the operator even if the browser is minimized if for example new chat is opened

18. Allows the operators to send/receive files via the online chat application

19. Allows the administrator/owner to set up the operating hours for the online chat application

20. Allows setting up a time zone in the online chat application

21. Restricts operator login to certain IP addresses, making it impossible to login from other locations

22. Allows the creation of an imaginary user for the chat for testing purposes

23. Shows a list of current visitors on web page

24. Allows operators to chat between each other within a chat room

25. For example replaces normal emoticons such as :) with a more graphical version of a smiley

26. Allows another operator to assist in the chat

27. Allows an operator to start a chat with visitors

28. The operator can see what the user is typing in real-time even if the user doesn't send the message

29. Allows the chat to expand to subdomains like app.domain.com and

www.domain.com

30. The online chat has a different interface in mobile devices

31. Allows creating rules such as starting a chat with a user that has viewed 6 pages automatically.

32. An eye catching pop-up that visualizes where the chat window is while minimized

33. Allows the online chat application to recognize users that have logged in

34. Allows operators to browse the website together with users

35. An application that let's operators use the online chat from their desktop without having to use browser

36. Allows transferring chat from one operator to another.

37. If the issue risen in chat is left unresolved, the operator can create a ticket of the chat to be resolved on a later date

38. Allows searching for certain words in chat history/tickets

39. A survey that asks user name and/or email or other information, which can be left blank.

40. A survey that asks for user feedback

41. The online chat application queue's visitors for chat if all operators are busy

42. Operator can tag a chat as a complaint, sales, spam, positive feedback etc. in the chat history.

43. Shortcuts on keyboard for previous chat window, first chat window, close chat window etc.

44. An application that lets operators work with mobile devices

45. Allows forwarding emails from a company's support email into tickets in online chat software

46. Allows forwarding Facebook messages and posts into tickets in online chat software

47. Sends all chats to an email after chats finish

48. Transfers a chat to another agent if message not answered in certain time/closes or makes chat inactive if no messages in certain time period

49. Allows the online chat to use features from integrated applications

50. Webhooks are pieces of information sent to a web server when particular event occurs.

51. Verifies operator login with a Google account

52. Maximum amount of chats open per operator

53. Automatically logouts after certain time period/amount of missed chats

54. Allows operator to customize the theme of the online chat application, for example changing colors etc.

55. Allows conversations using microphone

56. Allows conversations using webcam

57. An extension for browser that helps with managing the chat

6.2 Things to be considered when choosing online chat

There are many things to consider when choosing an online chat. As every online chat has the basic functionality, some are simple, offering the core features while others offer some extra features, such as Voice over IP. It is also important to consider the visitor base of the website: do the visitors come to the website with mobile devices or computers? Some online chat software offer mobile interface chats, while others do not.

Before choosing what online chat to use, it is important to survey possibilities and to take notes of what the company needs from the online chat software. For example while an Internet based store that sells digital products, such as game cd-keys for Steam or Origin, all they would need from an online chat software is to be able to answer queries or complaints from their customers. It would also be nice to have some analytics and chat history so that it would be possible to survey the queries made by visitors, and for example to find some features to improve on their own website.

A company dealing with other businesses however might want to have a VoIP feature as well as a webcam conversation feature, making them seem more trustworthy to the potential new customers by being able to show themselves in the chat.

It is important to note that the online chats also have different pricing options. For example Olark Chat offers four different payment options, the cheaper ones being directed to smaller companies while the more expensive ones are for enterprises.

6.3 Challenges in implementing online chat

There are no real challenges in the implementation of an online chat. If a company has direct access to their HTML pages, it is just a simple matter of copying and pasting a piece of code into the master page, or if there is no master page to all the html pages that are supposed to have the chat available. While having a master page makes it much easier to add the online chat to a website, it isn't necessary to have one. All that is required for the implementation is some very basic knowledge of HTML.

The biggest challenge in implementing an online chat is maintaining it. The resources needed for maintaining an online chat are the personnel that will answer to queries made by visitors, the operators/agents. It is important to gauge if an online chat is worth the personnel needed for maintaining it for the company in question. (Tuomikoski 2015.)

6.4 Benefits from implementing online chat

There are many benefits to having an online chat embedded to a website. In a website based on sales, a webstore, it helps the customers almost the same as having a personnel within a store to give customer information on products.

An online chat also helps a company in creating logs the conversations, making it easy to spot places to improve within the website. If there are many complaints or questions regarding some area of the website, it should most likely be improved somehow to make it more accessible to the user.

According to the research made by Finnchat, a chat personnel can help a customer with his/her problems within a webstore in 72.4% of the cases. Also according to the research, a customer that has experience of chat service will leave the webstore with 39,7% less chance when encountering a problem. (Finnchat.)

The research also states that a customer that has had a conversation via online chat during his visit will increase the probability of a purchase up to ten times to the regular visitor. A customer that has conversed via the online chat also makes around 37% bigger purchases than one who has not. (Finnchat.)

7 Summary

The objective of the thesis was to find out how online chats can be used in business environment. The thesis started with gathering background information on online chats, their uses and security issues within them. The goal of the thesis was achieved by implementing five different online chat software on a test environment and testing their usability, features and user interface. The thesis also provides information to anyone considering on implementation of an online chat to a business environment, such as what to consider, the challenges of the implementation and the benefits that come from it.

An online chat helps a company that operates via the Internet to create a more personal feel to their customer base, allowing them to address the single customer's needs for assistance. Many companies sell complicated products, such as PC parts in the Internet, making it a good tool for their experts in the field to help the not so knowledgeable customer base, allowing the customer to get assistance in choosing products best suited for the customer. An online chat is also a great tool for customer support, allowing a real time support like a call center without many of the costs.

The software tested in the thesis differ a lot in what they have to offer. While every software has the basic functionality and feature set of an online chat targeted for business use, the additional features differ a lot and even the user interface to achieve the end result had drastically different approaches in the five software chosen for comparison. It is important to think about what is needed from an online chat when selecting one, as well as to note the price differences in differing solutions. Finding an online chat software that suits the needs of a company while being as cheap as possible is no easy task.

The research on the topic could continue with for example taking an approach to the topic from a viewpoint of a business-to-business company. There could also be a research made on the pricing of online chats.

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Attachments

Attachment 1. Summary of Features Excel table

Features.xlsx