



Design of Public Opinion Monitoring Information System in Online Media

Aryo Pratama¹, Ali Ikhwan²

^{1,2}Department of Information Systems, University of Islam Negeri Sumatera Utara, Indonesia

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ABSTRACT (10 PT)

The Office of Communication and Information of North Sumatra has so far carried out the process of managing public information analysis manually using Microsoft Excel. This is of course less efficient considering the large number of incoming articles and the lack of data that may be out of sync. For this reason, an information system was created that can monitor public opinion in online media to facilitate the work of staff in carrying out the process of monitoring public opinion so that it is more efficient and effective so that it can improve service quality better. . This system is designed using Visual Studio Code as a text editor, PHP programming language as a web builder, Bootstrap as an interface design, and MySQL as a database on the system. This research produces a Public Opinion Monitoring Information System in Web-Based Online Media.

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Corresponding Author:

Aryo Pratama
Department of Information Systems
University of Islam Negeri Sumatera Utara, Indonesia
Jl. William Iskandar Ps. V, Medan Estate, Kec. Percut Sei Tuan, Kabupaten Deli Serdang, Sumatera Utara
Email: aryo.pratama@uinsu.ac.id

1. INTRODUCTION

Developments in the field of information technology, especially internet technology facilitate and assist various fields of work related to ease of access, distance and time. Seeing the rapid development of technology today, many companies and government agencies use computers as tools that can help store and process all forms of data quickly, precisely and accurately.

The North Sumatra Province Communication and Informatics Service is the implementing element of the North Sumatra Provincial Government in the field of information and communication led by a head who is under and responsible to the Regional Head through the Regional Secretary. The Office of Communication and Informatics manages various fields, one of which is the Field of Public Information Management (PIP). In the field of Public Information Management so far the implementation process has been done manually using Microsoft Excel. This is of course less efficient considering the large number of incoming articles and the lack of data that may be out of sync. For this reason, a web-based system is needed to facilitate the staff's work in carrying out the process of monitoring public opinion that will be published. The system can monitor the type of article or news and some other information in the article. Other features

are also available, such as public opinion monitoring recapitulation reports in online media which are printed in various formats.

Therefore we need an Information System for Monitoring Public Opinion in Web-Based Online Media so that it can facilitate the work of staff in carrying out the process of monitoring public opinion so that it is more efficient and effective so that it can improve the quality of service better.

Literature Review

1) Information System

The system is a collection of elements that together with systematic and structured rules form a unit that performs tasks to achieve a goal [1]. The system has several characteristics or properties consisting of system components, system boundaries, external environment of the system, system linkages and system objectives. Information is data that is processed to make it more useful and meaningful to the recipient and to reduce uncertainty in the decision-making process regarding a situation [1]. An information system is an organized combination of elements of hardware, software, communication networks, and information resources that collect, transform, and disseminate information within an organization [2].

2) Web and Applications

The web or what is often referred to as a website is a collection of pages that contain various information and can be accessed on the internet through a domain. The web can be accessed anywhere and through any device as long as it is connected to the internet. The components of a web consist of text, images, sound, video, animation and can be a combination of all of them [3]. Meanwhile, in language the word application comes from English, namely application which is defined as application or use. And when viewed in terms of the application is a program that is ready to use and deliberately made with certain functions for users [4].

3) Monitoring

Monitoring is monitoring that can be explained as awareness of what one wants to know, high-level monitoring is carried out in order to be able to make measurements through time that shows movement towards a goal or away from it [5]. Monitoring will provide information about the status and trends that the measurements and evaluations carried out are repeated from time to time, monitoring is generally carried out for specific purposes, to examine processes and objects or to evaluate conditions or progress towards the objectives of management results for the effects of actions of several types including actions to maintain on going management.

4) PHP

PHP is a web-based programming language written by and for web developers. PHP is a programming language that is often used on the server side of a web [6]. PHP is a programming language in the form of data that is managed through an input and output system to create websites [7].

5) XAMPP

XAMPP is free software that supports multiple operating systems, which is a complication of several programs. The function of XAMPP itself is as a stand-alone server, which consists of several other programs, such as: Apache Server, MySQL Database, and a language translator written in the PHP and Perl programming languages [2].

6) MySQL

MySQL is a multithreaded, multiuser SQL database management system or DBMS software, with around 6 million installations worldwide. MySQL is a database management system that is open-source. MySQL is a derivative of SQL (Structure Query Language). Users can add, modify and delete data in the database. MySQL is installed automatically when we install XAMPP [8].

7) HTML

HTML stands for Hypertext Mark-up Language. Hypertext here means that the text contained in the HTML script can be a link that connects to another page. This is in accordance with the web concept where the web is a collection of pages that are connected to one another. HTML is what is used to build a web [9].

2. RESEARCH METHOD

2.1 Data Collection

The author uses data reduction (data reduction), data display (data presentation) and inference (verification). Prior to analysis, material was collected according to existing types, after being collected it was analyzed using existing data description and interpretation methods, after which conclusions were drawn.

2.2 Data Sources

Primary data obtained through direct observation through tracking, scanning, editing, uploading and analysis of tracking data. In addition, information on existing problems for research purposes was obtained from in-depth interviews with North Sumatra Communications and Informatics Office employees. Secondary

data is data that has been documented, especially in the field of Public Information Services (PIP). In addition, the focus of this research is to find out activities in news analysis and public opinion and to find out whether the information used is positive, negative and neutral.

2.3 Literature Study

Literature study is a data collection method by searching, reading and collecting various kinds of reference books, journals and other literature related to research and other literature related to research and writing [10].

3. RESULTS AND DISCUSSION

3.1 Flow Map

Flow Map is a tool in tracing the flow of documents used in the system. The following is the Flow Map of the manual system that has been running previously in monitoring public opinion starting from inputting opinion data by journalists then processing it by PIP staff starting from submitting articles, analyzing and preparing reports then reports are submitted by the serving chairman.

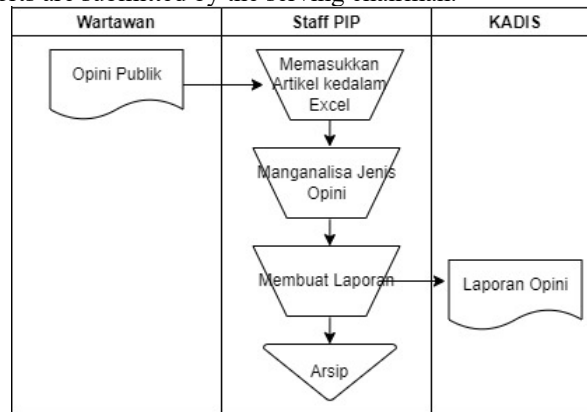


Figure 1 Flow Map of the running system

The flow map of the proposed public opinion system is inputted by journalists and then directly entered into the system and then filtered according to opinion categories and validated by staff. Then the data will be entered into the database and then the process of compiling opinion reports will be carried out and produce a final report that can be accessed by the head of service.

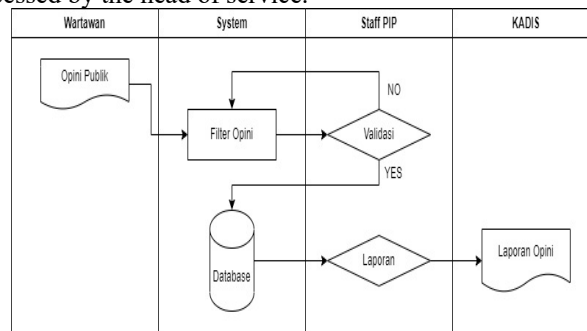


Figure 2 Flow Map of the proposed system

3.2 Use Case Diagrams

Use case diagrams are used to describe interactions between systems and users (users) [11]. In the use case diagram below, there is only one actor involved in the system, namely the PIP staff as admin. The admin's job is to manage all article data or public opinion that you want and have published, manage and make a final report on the status of the article or public opinion.

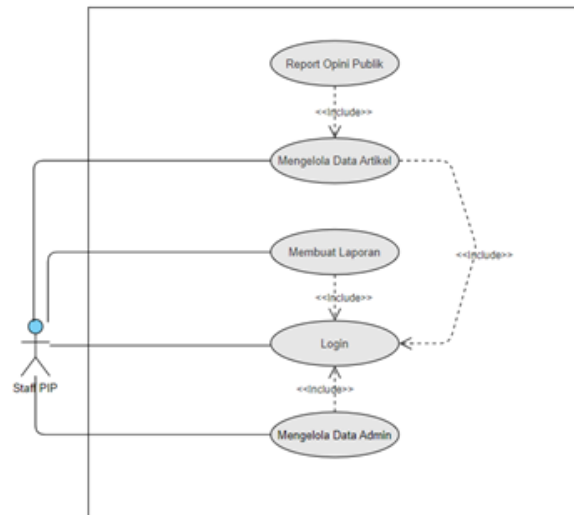


Figure 3 Use Case Diagram

3.3 Activity Diagrams

From this activity diagram we can see what activities are carried out by the user.

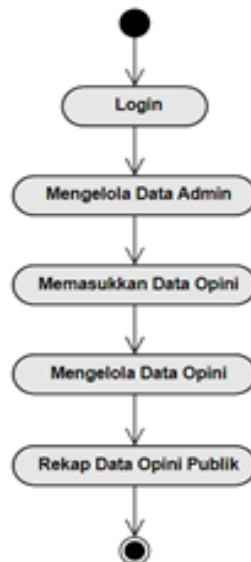


Figure 4 Activity Diagrams

3.4 Database Design

This Public Opinion Monitoring Information System application in Online Media is website-based and has a database consisting of 4 tables. Here's the database design:

1) Table of Accounts

#	Nama	Jenis	Penyortiran	Atribut	Tak Terminal	Bawaan	Komentar	Ekstra	Tindakan
1	id_akun	int(255)		Tidak	Tidak ada			AUTO_INCREMENT	Ubah Hapus Lainnya
2	nama	varchar(255)	utf8mb4_general_ci	Tidak	Tidak ada				Ubah Hapus Lainnya
3	email	varchar(255)	utf8mb4_general_ci	Tidak	Tidak ada				Ubah Hapus Lainnya
4	password	varchar(255)	utf8mb4_general_ci	Tidak	Tidak ada				Ubah Hapus Lainnya
5	level	varchar(255)	utf8mb4_general_ci	Tidak	Tidak ada				Ubah Hapus Lainnya

Table 1 Account Database

2) Table of News/Public Opinion

#	Nama	Jenis	Penyortiran	Atribut	Tak Terminal	Bawaan	Komentar	Ekstra	Tindakan
1	id_berita	int(255)		Tidak	Tidak ada			AUTO_INCREMENT	Ubah Hapus Lainnya
2	judul_berita	varchar(255)	utf8mb4_general_ci	Tidak	Tidak ada				Ubah Hapus Lainnya
3	teks	varchar(255)	utf8mb4_general_ci	Tidak	Tidak ada				Ubah Hapus Lainnya
4	id_akun	int(255)		Tidak	Tidak ada				Ubah Hapus Lainnya
5	publik	varchar(255)	utf8mb4_general_ci	Tidak	Tidak ada				Ubah Hapus Lainnya
6	tanggal	date		Tidak	Tidak ada				Ubah Hapus Lainnya
7	note	text	utf8mb4_general_ci	Tidak	Tidak ada				Ubah Hapus Lainnya

Table 2 Database of Public Opinion or News

3) Monitoring Process Table

#	Nama	Jenis	Penyortiran	Atribut	Tak Terlihat	Bawaan	Komentar	Ekstra	Tindakan
1	id_review	int(255)		Tidak	Tidak ada	AUTO_INCREMENT	Ubah	Hapus	Lainnya
2	id_berita	int(255)		Tidak	Tidak ada		Ubah	Hapus	Lainnya
3	id_akun	int(255)		Tidak	Tidak ada		Ubah	Hapus	Lainnya
4	jenis_berita	varchar(255)	utf8mb4_general_ci	Tidak	Tidak ada		Ubah	Hapus	Lainnya
5	tanggal	date		Tidak	Tidak ada		Ubah	Hapus	Lainnya
6	saran	text	utf8mb4_general_ci	Tidak	Tidak ada		Ubah	Hapus	Lainnya

Table 3 Opinion Review Process Database

4) Report Table

#	Nama	Jenis	Penyortiran	Atribut	Tak Terlihat	Bawaan	Komentar	Ekstra	Tindakan
1	id_selesai	int(255)		Tidak	Tidak ada	AUTO_INCREMENT	Ubah	Hapus	Lainnya
2	id_berita	int(255)		Tidak	Tidak ada		Ubah	Hapus	Lainnya
3	id_akun	int(255)		Tidak	Tidak ada		Ubah	Hapus	Lainnya
4	id_review	int(255)		Tidak	Tidak ada		Ubah	Hapus	Lainnya
5	note	text	utf8mb4_general_ci	Tidak	Tidak ada		Ubah	Hapus	Lainnya

Table 4 Report Database

3.5 Application Design

This Public Opinion Monitoring Information System application in Online Media will only display the admin page because here the PIP staff functions as admin as well as user.

1) Account Registration Page

The following is a display of the account list page, which later the account will be approved by the existing admin account. On the registration page, you must enter your full name, email and password.

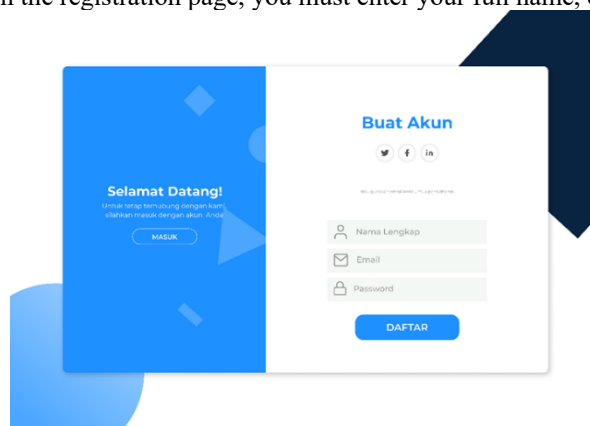


Figure 5 Display Page Registration

2) Login Page

The following shows the account login page that can only be accessed by the admin. On the login page, the admin needs to enter an email and password so they can enter and manage data on the website.

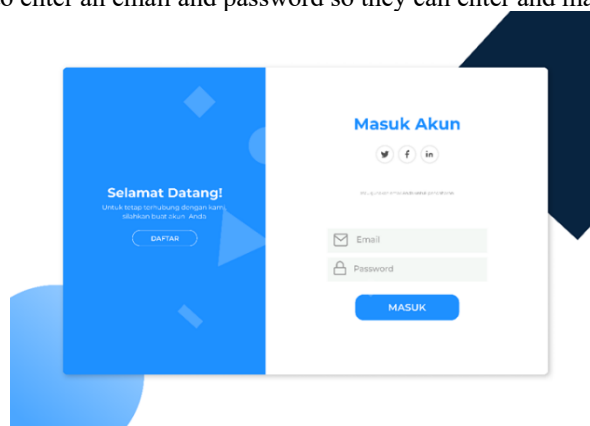


Figure 6 Display of the Login Page

3) Home Page (Dashboard)

After successful account login, you will be immediately redirected to the start page. Here the admin can see the status of opinion or news data that has been managed and entered, and can view existing news.

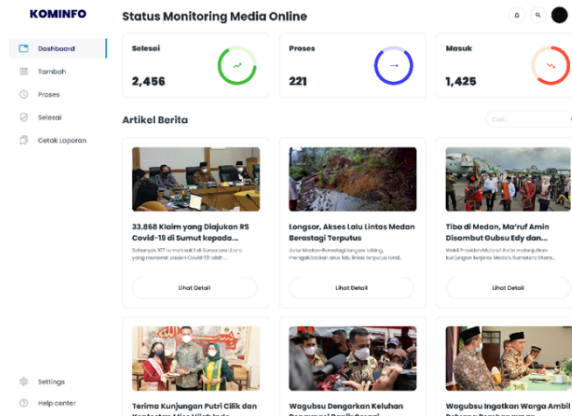


Figure 7 Dashboard View

4) News Data Page

This display contains information on news titles, online media that have been published, staff who have reviewed whether the status of the news is public information or not, dates and abusive actions.

Filter Artikel	Artikel Berita	Media Online	Review	Info Publik	Tanggal	Aksi
	33.868 Kiam yang diajukan RS	detik.com		Yes	Feb 10, Jan	...
	33.868 Kiam yang diajukan RS	cheandoreli.com		Yes	Feb 10, Jan	...
	33.868 Kiam yang diajukan RS	kumpas.com		Yes	Feb 10, Jan	...
	Longsor, Akses Lulu Lintas Medan	kumpas.com		Yes	Feb 10, Jan	...
	Longsor, Akses Lulu Lintas Medan	antaranews.com		Yes	Feb 10, Jan	...
	Uat Kana Sinda Dokter, Gubwu	Antaradaily.com		Yes	Feb 10, Jan	...
	Uat Kana Sinda Dokter, Gubwu	waspadaco.id		Yes	Feb 10, Jan	...
	Hasrat HGS Minto memprovisi rambu	infobumnews.com		Yes	Feb 10, Jan	...
	Tiba di Medan, Mar'uf Amin disamt	kearifasentralid		Yes	Feb 10, Jan	...
	Tiba di Medan, Mar'uf Amin disamt	sentraberita.com		Yes	Feb 10, Jan	...
	Tiba di Medan, Mar'uf Amin disamt	indosumut.id		Yes	Feb 10, Jan	...
	Wagubwu Dengarkan Keluhan	Mudaneews.com		Yes	Feb 10, Jan	...
	Wagubwu Dengarkan Keluhan	Orbitidgnewsid.com		Yes	Feb 10, Jan	...
	Wagubwu Dengarkan Keluhan	cosumut.com		Yes	Feb 10, Jan	...

Figure 8 Display of News or Opinion Data

5) Add News Page

In the news data added popup, there are several forms that must be filled in, such as the news title, news link, whether the information is public information status or not, the date and a short excerpt from the news.

Figure 9 Add News Data

6) Monitoring Process Status Page

In the monitoring process status display, there is information on news titles, online media sites that publish news, staff who have reviewed the news, type of news, date and crud actions. There are several types of news, such as: Negative news that has the potential to become a crisis media issue, neutral news that raises issues around the North Sumatra Provincial Government, Positive news that creates issues around the North Sumatra Provincial Government and news releases carried out by the North Sumatra Provincial Government. Office of Communication and Information of North Sumatra Province.

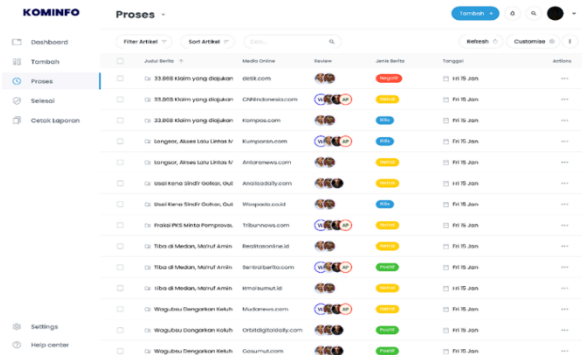


Figure 10 Display of Monitoring Process Status

7) News or Opinion Review Page

In view of this is the process of reviewing news from online media by staff. And determine the type of news that has been published, the type of local media or national media and provide suggestions for news that has been published by online media.

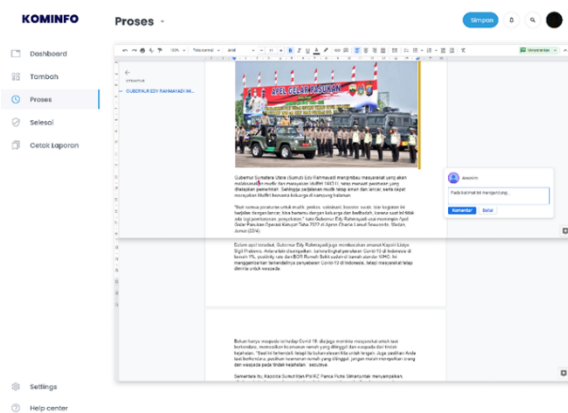


Figure 11 News Review Display

8) Completed Page or Report

In the following display, the report page displays displaying public opinion that has been properly reviewed and monitored. Then you will see news or public opinion as well as news status on this page so that the opinion is processed immediately.

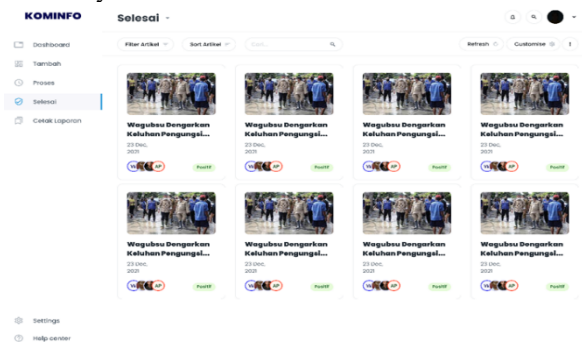


Figure 12 Display News Report

4. CONCLUSION (10 PT)

With this public opinion monitoring application, especially in the field of public information management at the Communication and Informatics Office of North Sumatra Province, it is hoped that it can facilitate work so that it can improve service quality better. This system can be developed further with more perfect features according to future needs.

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