Bali State of Polytechnic Typography

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Abstract: Computer technology has developed from 1985 until now it has been very far developed. This development occurs in all fields of life. Like the world of medicine, industry, agriculture and others. Technology is also very helpful for various human work to be easier, faster and efficient. This computer technology is in the form of hardware and software. Corporate Identity is the first image and image seen by the community. Consumers assess the image, professionalism and level of trust in the company from this Corporate Identity. Once the importance of this identity that it can be concluded that some of the characteristics that must be possessed by a good, professional and reliable company identity in the eyes of consumers, customers or investors. Corporate identity must be easy to remember because there are two things that must be possessed by a product or company identity. First that the corporate identity must be able to make consumers remember the company when you want to buy a product, in other words that corporate identity must have the nature that proposes or influences. Second, corporate identity must be able to make consumers recall the company when they want to buy the same product for the second time or when going to repeat orders. Usually in addition to the image or image there are also typography that accompany. Typography of the Bali State Polytechnic Symbol (PNB) will later help all stakeholders in finding information on the shape of the image and text that will be used as a corporate identity of PNB. The use of typography will also facilitate the introduction of the Bali State Polytechnic institution as the leading vocational education institution producing international competitive professional graduates in Indonesia.

1 INTRODUCTION

1.1 Problem Background

Technology advances today are very rapid and include all disciplines. Especially in computer technology, the use of computers in daily life can not be released with lifestyle. Almost every activity or work carried out is greatly helped by the existence of a computer. Technological advances always aim to help human life better, more comfortable, or easy. But there are still many people who still do not use technology, for example the closest to our lives is digital technology.

Digital technology has been widely used in various fields, both felt or not felt, for example the closest is songs. In the era of the 80s and 90s,

listening to music still uses cassettes (cassette ribbons), whereas now without feeling already using digital files for songs, namely MP3. Digital cameras also give us a lot of convenience compared to film cameras.

In the development of communication and interaction between companies and consumers many are done through the media, among others, with symbol-symbols or symbols that are brand products. These symbols are usually in the form of images and text, which will be the hallmark of a company (Luthfi, 2014).

Bali State Polytechnic (PNB) in 2021 has carried out visual Lauching Corporate Identity in the form of a new PNB symbol in accordance with the 2015 campus statutes. For typography used while using typoface or images that resemble letters. To avoid

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the existence of these letters has a license that must be accounted for (Ariesta, 2013).

So researchers have the idea to make typography as a brand product that has a philosophical value contained in the PNB symbol. This will also be used by all academic community in the Bali State Polytechnic as a means of promotion to the community so that it is easy to remember and recognize that the Bali State Polytechnic is one of the vocational educational institutions that have professional graduates and international competitiveness (Ilham, 2021).

1.2 Problem

One way to facilitate the introduction of this PNB symbol to be able to interact with the user community is to make the PNB symbol containing typography that is easily known.
The problems that arise are:

a. How to make typography so that it is easily recognized and easily remembered by the user community and has its own characteristics.
b. What applications are used to create these typography.

2 RESEARCH METHOD

2.1 Approaches and Concepts

This typography is very close to workers in the design world. So for you prospective graphic designers, don't be lazy to get to know more about typography. One of the most appropriate places to learn it is in the International Design School, because you will be taught directly by the experts. Besides typography, in IDS you will also learn other things that are important for your career as a graphic designer later (Rina, 2019). Using books, articles and other decent sources, such as manuscripts available on the internet to support this research problem. This research design is described as follows:
From the picture above is a research concept that can be explained with the following steps:

1. Preparing existing data that has been found in the 2015 Bali State Polytechnic Statute.
2. The data obtained will be reprocessed according to the existing statutes.
3. Using Corel Draw as a vector graphics processor as a typography processing to produce a visual corporate identity with a proportional form.

4. The form of symbols in the form of digital or traditional documents will produce information for the academic community and the user community.

True Type Font is one type of digital letters that can write down characters and can be run on the Windows operating system (EES, 2006). True Type Font is one of the made from Microsoft Office as Open Type Font (OTF). Photoshop, Illustrator, INDESIGN will carry a postscript font type package as a type of default writing to run the application. Adobe also has its own type of letter namely, Adobe Type Manager (ATM) which is the standard type of product made by Adobe. As the development of the world of technology, writing or font face that used to only exist in paper printing media also developed (Pendit, 2008). Fonts develop into digital in the world of printing and communication. The world of font technology has taken a big step with the emergence of innovative letters designs and has enriching the world of visual communication design in digital form (Adi, 2004). On the initial journey of digital font technology, fonts are designed with definite sizes such as 9, 10, 12, 14, 18 and 24pt using the computer screen bitmap standard so that it has weaknesses when the font must be enlarged or reduced. However, now with the presence of vector and anti -font technology technology continues to develop by leaving bitmap technology. The type of writing True Type is more popular than the postscript font. True Type is an outline information - based font and the need for the size of the vector format can be adjusted with high accuracy. True Type uses the Quadratic B-Spline method by applying points directly on the lines and parts that are curved. Standard software from (Saul 2011).

True type is made by Apple, but now it can also be used by the Windows operating system. Both systems have True Type Rsterizer which provides information for the depiction of the screen and print output. True type is designed as a single file (suitcase), in which there are already families in the form of plain, plain italic, bold and bold italic make this type of letter more neat in file data collection compared to postscript font (Suryanto, 2004).

Corel Draw is a software or computer desktop - based application that is used to create or do vector graphic editors. Applications created by Corel (a software company based in Ottawa, Canada) was first released with version 1 in January 1989. In its development, this application has appeared the latest version of Corel Draw 8 or Corel Draw X8 which was released on March 15, 2016. This Corel Draw application focuses on image editors, so that it is

widely used by users in the field of advertising, visual design, and printing and other fields that require visualization format (Chandra, 2003)(Willy, 2005).

2.2 Flowchart

This study begins with preparing supporting data such as Windows systems, Word applications, Excel, PowerPoit, Photoshop, Corel Draw, Anti Virus Applications as Resident Memory Applications and several other applications. Processing of vector images that are run on the Windows system and printable as a preview.

2.3 Research Procedure

1. Installing systems on computers with various versions such as Windows XP SP3 systems, Windows Vista systems and Windows 7 systems and several other applications such as Microsoft Word, Microsoft Excel, Microsoft PowerPoint, graphics applications such as Adobe Photoshop, Corel Draw, Macromedia Flash, Macromedia Dreamweaver

2. Implementation of this Corel Draw vector processor is used in localhost first with various printables such as PDF Viewer and Microsoft Paint.

3. Perform processing processes on localhost, after running well then publishing to hosting and domain server like the website.

4. Measurement of proportional PNB symbol data (P3M, 2017)(P3M, 2021).

5. Comparing the results of data processing in localhost with data to be published on the website.
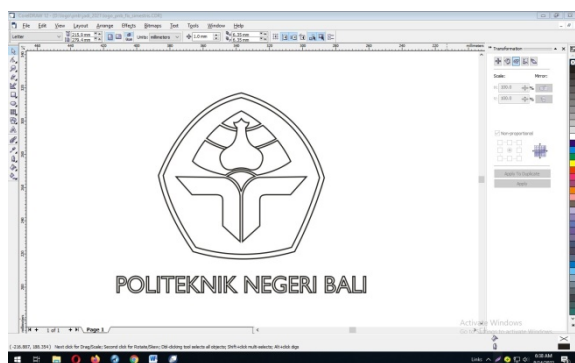

Figure 1: Design Block Diagram.

The basic framework of making a Bali State Polytechnic Corporate Identity in the form of an upright line and curved line
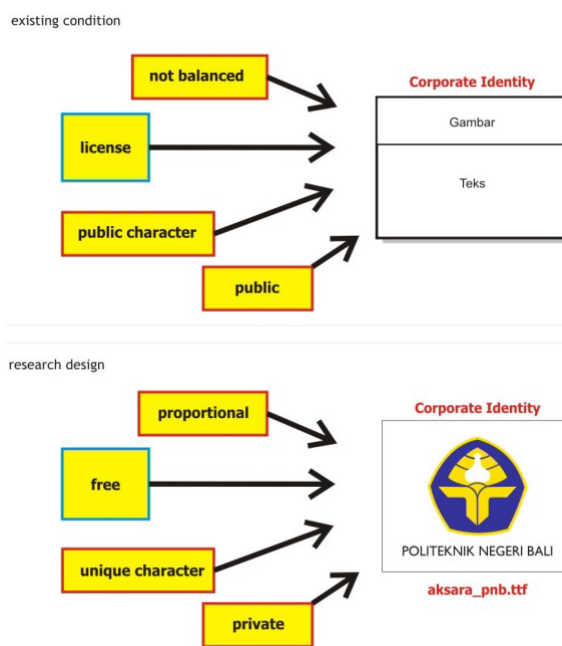

Figure 2: Existing Conditions and Research Design.

3 RESULT AND DISCUSSION

In this study we use the same files to get stability in measurement. This treatment is carried out on the same application by distinguishing the use of typeface characters in the Character Map. Making characters using the Corel Draw vector processing application. The results are exported to the TTF or True Type Font form. Character design uses 9x9 matrix with a total width of 720pt and 720pt height.

3.1 Result Measurement

Each form of letters in an alphabet has a physical uniqueness that causes our eyes to be able to distinguish between the letter 'M' with 'P' or 'C' with 'Q'. A group of psychologists from Germany and Austria in 1900 formulated a theory known as Gestalt theory. This theory is based on 'pattern seeking' in human behavior. One of the laws of the perception of this theory proves that to know or 'read' an image requires a contrast between a positive space called a figure and a negative space called the ground.

3.2 Discussions

The first step to study typography is to recognize or understand the anatomy of the letters. The combination of all components of a letter is a visual

identification that can distinguish between letters from one another. If we have understood the anatomy of the letters well, we can easily recognize the characteristics and characteristics of each type of letter. The following is a terminology that is commonly used in naming every visual component structured in physical letters.

Every individual letter, number, and punctuation in typography is called character. The entire character optically flat to the baseline. Height of the body of lowercase letters optically flat with x-height. Each character whether a large or lowercase letter has a stem (stem) which at the ends can be found several final lines as a cover called the terminal.

Basically each letter consists of a combination of various strokes (strokes) which are divided into two, namely basic stroke and secondary line strokes.

Table 1: Review from Angle.

Geometry	Result	Figure	Result
Flat upright line	EFHIL	negative curved angle	BCDGOP QRSU
Tilted upright line	AKMNVZ XYW	negative rectangular angle	EFHILT
Curved upright line	BDGJPRU	negative triangle angle	AKMNV WXYZ
Curve	COQS		

Table 2: Review from Ground.

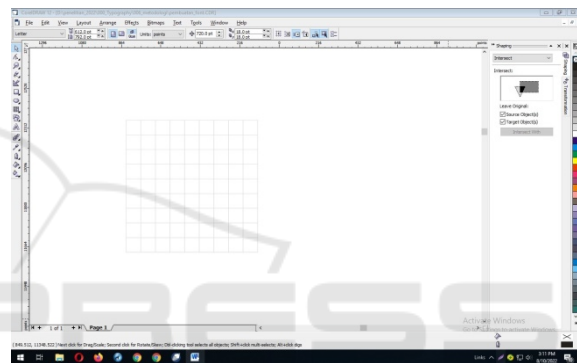| Geometry	Result	Figure	Result
Flat upright line	efhil	negative curved angle	bcdgopqrsu
Tilted upright line	akmnvzxyw	negative rectangular angle	efhilt
Curved upright line	bdgjpru	negative triangle angle	akmnvwxyz
Curve	coqs		

Figure 4: Character Design.

The odd matrix used to get the middle position on the object in the form of middle letters with the same proportional. We use an area of 80 square points with an area of 720 square points. so there are 72 points of object forming points.
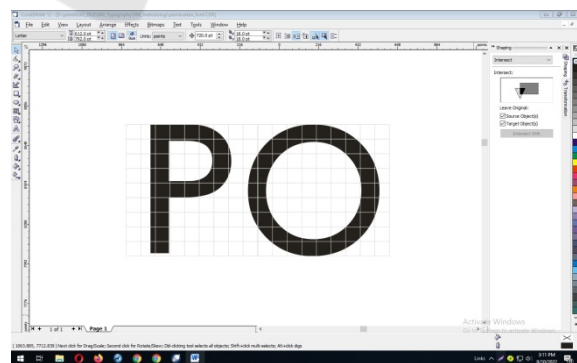

Figure 5: Unique Character.

The unique character that is highlighted and formed in this study is the letter o in the text of "POLITEKNIK NEGERI BALI" is really a circle
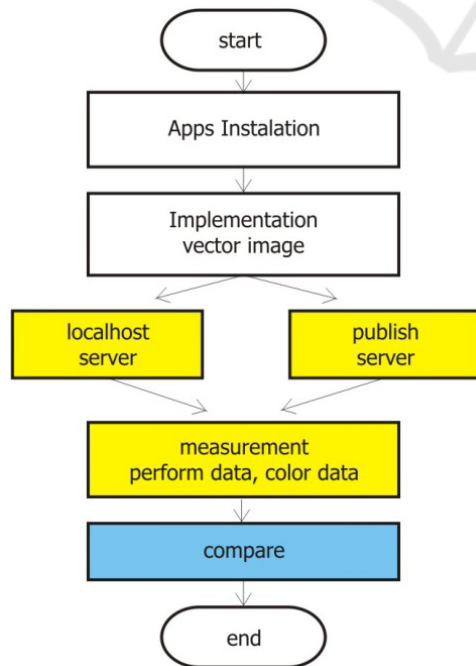

Figure 3: Research Flowchart.

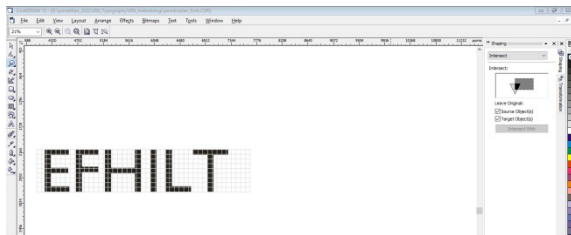- making object characters from the rectangular angle of the flat line

Figure 6: Flat Upright Line.

- making object characters from the triangle angle of the tilted line tilted
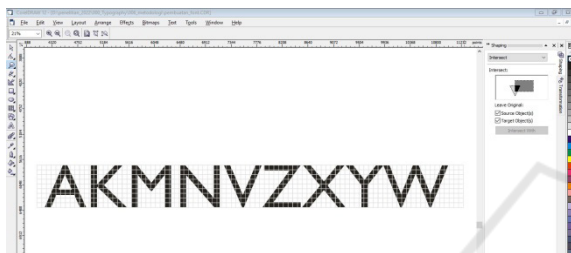

Figure 7: Tilted Upright Line.

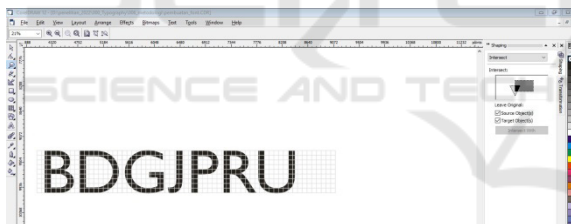- making an object character from the arch of the curved line
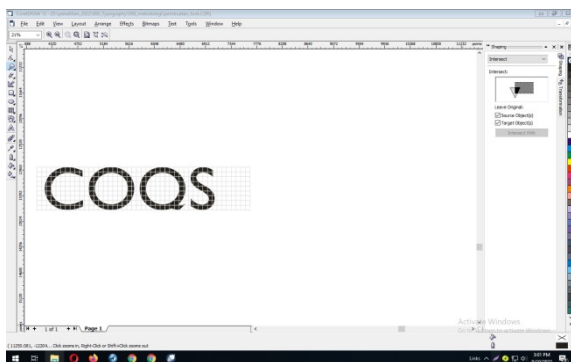

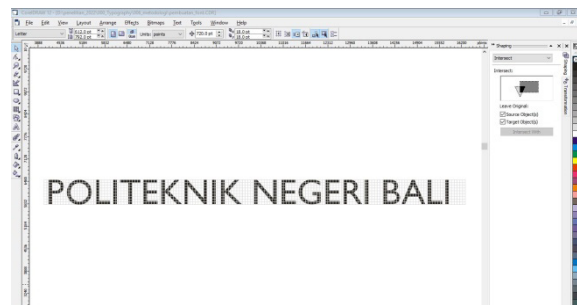Figure 8: Curved Upright Line.

Figure 9: Curve.

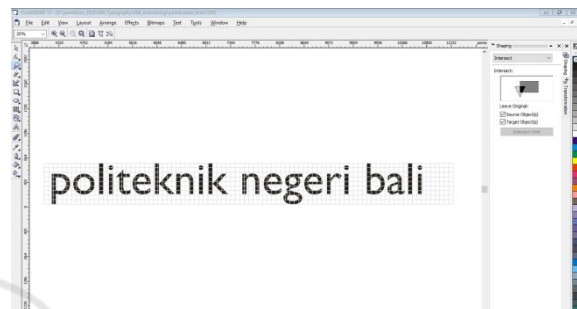Figure 10: Typography from Angle Review.

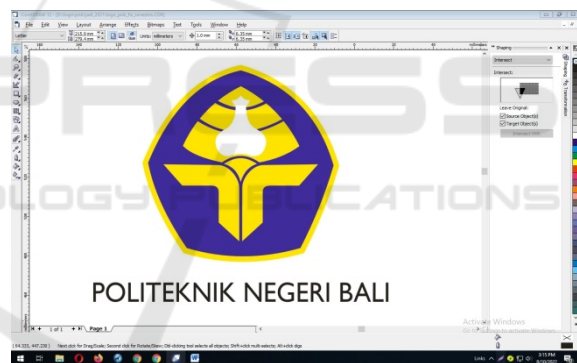Figure 11: Typography from Ground Review.

Figure 12: Complete Typography on The Symbol.

4 CONCLUSION

From the progress of the research we have done, it can be concluded that by means of an understanding approach that is in accordance with the theory of geometry, figures and ground, the form of physical uniqueness of the typeface produced in accordance with the brand of the Bali State Polytechnic.

Calculation of physical height of letters has an optical-mathematical principle, in the sense that in the calculation of numbers, some letters in the alphabet have different height, but optically the whole letter looks the same height. Letters that have curved shapes and taper triangles at the top or lowest

parts of the body will have more fields than letters that have a flat shape. If some of these letters are printed side by side, optical similarity will be achieved.

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