

**WORD FORMATION PROCESSES OF COMPUTER TERMS IN *PC MILD* TABLOID: A Morphological and Morphophonemic Study**

**Thesis**

*Submitted as Partial Fulfillment of the Requirement to Obtain the Strata One (S1)  
Degree*



Vanny Refniza  
01650/2008

**Advisors:**

**Prof. Dr. Jufrizal, M.Hum.  
Drs. Amri Isyam, M.Pd.**

**ENGLISH DEPARTMENT  
FACULTY OF LANGUAGES AND ARTS  
STATE UNIVERSITY OF PADANG  
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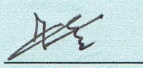
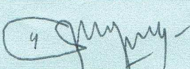
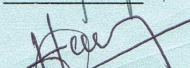

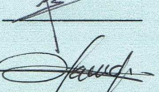
**Jurusan Bahasa dan Sastra Inggris  
Fakultas Bahasa dan Seni  
Universitas Negeri Padang**

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Nama : Vanny Refniza  
NIM/ BP : 01650/ 2008  
Program Studi : Bahasa dan Sastra Inggris (S1)  
Jurusan : Bahasa dan Sastra Inggris  
Fakultas : Fakultas Bahasa dan Seni

**Padang, 18 November 2011**

**Tim Penguji**

	<b>Nama</b>	<b>Tanda Tangan</b>
<b>Ketua</b>	<b>: Prof. Dr. Jufrizal, M.Hum.</b>	
<b>Sekretaris</b>	<b>: Drs. Amri Isyam, M.Pd.</b>	
<b>Anggota</b>	<b>: 1. Dr. Hamzah, MA., MM.</b>	
	<b>2. Drs. Jufri, M.Pd.</b>	
	<b>3. Havid Ardi, S.Pd., M.Hum.</b>	



## HALAMAN PERSETUJUAN

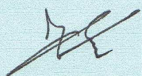
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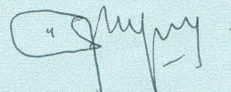
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Pembimbing I,



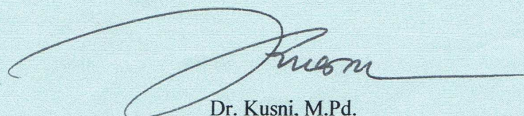
Prof. Dr. Jufrizal, M.Illum.  
NIP. 19670722 199203 1 003

Pembimbing II,



Drs. Amri Isyam, M.Pd.  
NIP. 19490912 197503 1 002

Diketahui oleh:  
Ketua Jurusan,



Dr. Kusni, M.Pd.  
NIP. 19620909 198803 1 004

## ABSTRAK

**Refniza, Vanny. 2011. *Word Formation Processes of Computer Terms in PC Mild Tabloid: Morphological and Morphophonemic Study*. Skripsi. Padang: UNP.**

Proses pembentukan kata adalah suatu proses dari pembentukan kata baru dalam suatu bahasa. Tujuan utama dari penelitian ini adalah untuk menganalisis proses pembentukan kata yang terjadi pada istilah-istilah komputer. Selain itu, penelitian ini bertujuan untuk mengidentifikasi jenis-jenis pembentukan kata apakah termasuk *compounding*, *acronym*, *derivation*, *clipping*, *blending* atau proses lainnya. Disamping itu, penelitian ini juga mengidentifikasi fungsinya dan menganalisa bentuk perubahan dan proses morfofonemik yang terjadi pada istilah komputer pada tabloid PC Mild.

Metode yang digunakan pada penelitian ini yaitu deskriptif kualitatif. Seluruh data yang berupa istilah-istilah komputer dideskripsikan berdasarkan metode yang digunakan pada penelitian ini. Langkah-langkah dalam menganalisis data pada penelitian ini yaitu: (a) mensortir istilah komputer yang termasuk proses pembentukan kata agar tidak terjadi kesalahpahaman kata, (b) mengelompokan data berdasarkan jenis pembentukan kata menurut teori yang dipakai, (c) mengidentifikasi istilah komputer berdasarkan jenis masing-masing kata dengan menggunakan tabel, dan (d) menganalisis data berdasarkan jenis, fungsi, dan morfofonemik.

Dari penelitian ini, peneliti menemukan 165 istilah komputer yang mengalami pembentukan kata dalam Bahasa Inggris dan 43 kata dalam pembentukan kata bahasa Indonesia. Jenis pembentukan kata yang ditemukan yaitu; *acronym* (48), *compounding* (43), *derivation* (22), *clipping* (2), *blending* (6), *coinage*(6), *back-formation* (1) dan proses yang mengalami lebih dari satu proses yang dikenal dengan *multiple processes* (37). Selain itu, proses morphological dan morfofonemik; *affixation* (11), *dissimilation* (10), *assimilation* (9), *changing vowel and consonant* (5), *reduplication* (3), *addition* (3), and *compounding* (2).

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Finally, I welcome any criticism and suggestion from the readers for improving this thesis. I also hope it can give contribution to the English Department students in discussion the same field.

Padang, November 2011

Vanny Refniza

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## CHAPTER I

### INTRODUCTION

#### A. Background of the Problem

Nowadays, language changes and develops because of the development of media communications and technology. The new popular ones can be seen continually in tabloid, newspaper, magazine, television, and the latest, the World Wide Web. It causes the development of language which is signed by the appearing of many new words, such as *DOS (Disk Operating System)*, *RAM (Random-Access Memory)*, and *MB (megabyte)*. A computer with its vocabulary has entered new vocabulary in society. Words which were used only by programmers a few years ago, now are used extensively by teenagers. There is an active process of term-expansion and structural (morphological) changes of words in language (Dmytruk, 2009). It means that there are some processes in those words change whether in lexical or pronunciation.

Besides, the development of computer technology causes the variation of word formation in computer terms, such as *notebook* which undergoes the process of compounding, *PDA (Personal Digital Assistant)* which undergoes the process of acronym, and *camcorder (Camera Recorder)* which undergoes multiple processes from acronym and blending. Compounding, acronym and blending are the processes of creating new words or called by word formation processes.

Word formation processes are the processes of creating of the new word. The word may be an old word and then the word is created into new one. Yule (2006: 52-53) defines word formation processes as the study of the processes whereby new words come into being in a language. People can very quickly understand a new word in language and accept the use of different forms of it. This ability should derive in part from the fact that there is a lot of regularity in the word-formation processes in language. It means that the creation of new word will use in communication and then become familiar; consequently it becomes lexicon of the language.

Now, in 21<sup>st</sup> century, new words or terms related to computer technology possibly outnumber all others. The increasing of new words in the computer terms are caused computer technology is rapid growth. Together with the rapid progress of computer sciences proper terminology developed and formed. Linguists have calculated that fifteen years ago Ukrainian terminology on computing numbered only about 3000 lexical units. For comparison, at present there are 14000 of them (Dmytruk, 2009). Therefore, as tool for working with information, computer is one of humanity's most important creations. The variation and the number of terms can make people get difficulties in understanding the meaning of the terms and following the development of computer technology, whereas in fact people need to be aware with this technology considering computer is important equipment in this modern era. One of the medium to realize about it is PC Mild tabloid

*PC Mild* Tabloid is one of the popular computer tabloids in Indonesia and a good source of new technology information, especially in using and functioning

hardware and software in computer. It is powered by PC Media magazine and backed by Pinpoint Publication in Jakarta. Therefore, the language in it is Indonesian, but there are a lot of terms purely English word formation which are adopted from computer words. Besides, the language of this tabloid effect the morphological words in the computer terms, such as the addition Indonesian prefix *di-* and *me-*. For example, the words *di-capture* and *meng-upgrade*; *di-* + *capture* (V) which undergoes the process affixation, and *meng-upgrade* (*meng-* + *upgrade*) which undergoes the process of dissimilation. This process is also called morphophonemic.

Based on the fact above, there are three reasons why the researcher is interested in analyzing computer words in PC Mild tabloid. The first one is because PC Mild tabloid is a popular computer tabloid which uses Indonesian language. The writer takes the computer terms in PC Mild tabloid in March 2011 edition which contains many computer terms. It reviews technologies in previous months and introduces the newest technologies in March. Second, computer is important for daily life so the writer thinks the computer is needed for society in order to mastering the terms first. Last, the writer finds that processes of word formation in computer terms are complicated, so the writer assumes that there should be a specific process of the word formation involved. For instance, the term *BD-R* experiences more than one word formation processes. The first process of the word *BD-R* is acronym from the word *Blu-Ray Disc Recordable*. Next, the word *blu* comes from the word *blue* and *laser* which is compounded and clipped become *blu*. Last, *recordable* is derivation from the word record and suffix *-able*.

Therefore, through this study the researcher wants to analyze the word formation processes of computer terms in *PC Mild* Tabloid. The researcher wants to research how the computer terms in *PC Mild* tabloid are formed, the function of the terms, and the last one how the morphological and morphophonemic change in the computer terms.

## **B. Identification of the Problem**

Word formation belongs to morphology study, which in linguistics represents the study of construction rules of words. Moreover, morphology is the study of the internal structure of words, rules for combining parts of words to make complex words. There are many things that can be studied on word formation processes. First, it can be studied from semantic aspect that discusses on the meaning of words used in computer terms. Second, it can be analyzed from the structure or syntactic aspect. The form often reflects their syntactic function, and the parts are often composed of meaningful smaller pieces.

Word formation is a part of morphological study that concerns how the words are formed. It is the way of forming new words by taking existing words or pieces of words, and putting them together. Morphological rule guides the people in understanding the words that have never encountered before, judging that words are impossible, and creating new words. In this study, the researcher will try to analyze the process of word formation in the computer terms in morphological side. It will discuss about how the computer terms are formed and constructed.



### **C. Limitation of the Problem**

This research focuses on the study of the types, functions, morphological and morphophonemic rules of computer terms in PC Mild tabloid. The source of data was limited to the PC Mild tabloid in March 2011 edition because it covers all of the computer terms in PC Mild tabloid. This research focuses to analyze types, functions, morphological and morphophonemic rules in computer terms found in the PC Mild tabloid.

### **D. Formulation of the Problem**

In this study, the researcher focuses on the morphological rules of word formation in the computer terms. Related to the limitation, the researcher has formulated the problem as follow: “What are the types, functions and morphological rules of computer terms in PC Mild tabloid?”

### **E. Research Questions**

From the formulation, the main point of this research is to identify morphological and morphophonemic study in the process of word formation in computer terms found in PC Mild tabloid. In order to guide the readers come to the main purposes of this study, the researcher will formulate the research questions as following:

1. What are the types and functions of the word formation used in computer terms in the PC Mild tabloid?

2. How do the rules of morphological and morphophonemic in computer term found in *PC Mild* tabloid?

### **F. The Purposes of the Research**

The main purpose of this research is to analyze morphological and morphophonemic processes in word formation processes used in the computer terms. The source of the data in this research is *PC Mild* tabloid. Thus, related to the questions above, the goals of this study are:

1. To analyze types and functions of the word formation that is used in computer terms in the *PC Mild* tabloid.
2. To analyze how the rules of morphological and morphophonemic in computer terms found in *PC Mild* tabloid.

### **G. Significance of the Research**

This research is expected that the findings of this research will give contribution to the linguistics field. It will give a better understanding for the reader about word formation processes used in the computer terms that will be found in *PC Mild* tabloid. By having more understanding about computer words which are involved by the processes of word formation, the researcher hopes that the reader can follow the development of computer technology.

Furthermore, this research can be used as an additional reference for those who are interested in studying further about word formation processes, especially in

computer terms. The reader also recognizes morphophonemic process in computer term found in PC Mild tabloid. The researcher also hopes that this research can provide more knowledge for linguists about the formation of computer terms that are always developed.

## **H. Definitions of Key Terms**

To avoid misunderstanding in this research, the researcher defines specific key terms as follows:

1. Computer terms : a word or expression that is used in computer technology. It covers computer hardware, computer software.
2. Word formation processes : processes of creating new words or terms from the old words to be the new uses the creation of new words.
3. PC Mild Tabloid : a computer tabloid in Indonesia which is published once in two weekly by Pinpoint Publication.
4. Morphological process : a process of changing a stem to adjust its meaning to fit its syntactic and communicational context.
5. Morphophonemic process : a process of changing the form of morpheme is based on the sounds surrounds it which relates

to the correlation between morphemes and phonemes.

## **CHAPTER II**

### **REVIEW OF RELATED LITERATURE**

This chapter discusses the related theories as the theoretical bases of this research and it consists of two main parts, which are review of related literatures and review of related findings. First, review of related literature includes the related fundamental theories that underlie this research. Second, related findings are the comparison study with previous study as the supporting theories and references in this research.

#### **A. The Related Theories of Morphology in Word Formation**

Word formation is a part of morphology that discusses how words are formed. Bauer (1983: 33) says “morphology, an area of linguistics, dealing with the internal structure of word forms.” Word formation is the one branch of it. In other point of view, O’Grady and Guzman (1996: 132) in a book *Contemporary Linguistics* define morphology as the system of categories and rules involved in word formation and interpretation. It means that morphology is the study of the analysis of word structure. Then, morphology is the study of grammatical word structure that includes word formation process. It is also a study of analysis the structure, the form and classification of words.

Morphology is a conceptual centre of linguistics; this is not because it is the dominant subdiscipline, but morphology is the study of word structure, and words are



at the interface between phonology, syntax and semantics (Spencer and Zwicky, 1998: 1). Words have phonological properties, they articulate together to form phrases and sentences, their form often reflects their syntactic function, and their parts are often composed of meaningful smaller pieces.

However, Jufrizal (1999: 62) states that morphology is one of main parts of grammar that belongs to micro linguistics. He also said that morphology is the study of morphemes, its nature, types, and patterns in a particular language. Morphology has only recently been studied into transformational generative grammar which is classified into the field of phonology and syntax. There are two major types of rules which are related to morphology, they are word formation and adjustment rules. Parker and Riley (2005) define morphology in simple way. They state that morphology is the study of word formation. Morphology is words and concerned with the structure of sentences. The goal of morphological analysis is to determine the rules that speakers actually follow for forming words in a particular language. In short, morphology is one of the linguistic study dealing with the internal structure of the word.

Furthermore, Fromkin *et al.* (2007: 77) state that morphology is the study of the internal structure of words, and of the rules by which words are formed. It means that morphology is the study of words and their structure. In other words, morphology is the study of word formation and the internal structure of word. They add that morphology consist of two, those are inflectional morphology and derivational morphology. Inflectional is the use of certain types of grammatical

morphemes that can also be illustrated with sentence frames. Meanwhile, derivational morphology is the new words that enter the language in two main ways, through the addition of words unrelated to any existing words (borrowed from other languages) and through word-building or derivational morphology, the creation of new open class words by the addition of morphemes to existing roots.

In addition, Zaim (2008: 1-5) says that morphology deals with the internal structure of words and it is the study of how words are structured and how they are put together from smaller parts. General morphological theory is concerned with delimiting exactly what types of morphological rules can be found in natural languages. The morphology of a particular language, on the other hand, is a set of rules with a dual function. First, these rules are responsible for word formation, the formation of new words. Second, they represent the internal structure of the already existing words of a language. Then, he also says that morphology is the study of meaning-bearing units and the rules governing them, the study of the structure of words. A unit of language that did bear meaning is considered to be a morpheme. A morpheme is the smallest meaning-bearing unit of language. For example, *re-* is not a word, but it does carry meaning. In other word, morpheme is the minimal linguistic unit which has a meaning, such as *un-* in the word *unhappy* or grammatical function, such as in the word *cats*

In short, morphology is one of the linguistic studies dealing with the study of the internal structure of word. Morphology is the study about words and how they are constructed. Then, morphology focuses on the study of word formation and how the

word is constructed in a language. From the explanations above, it can emphasize that morphology is the study of how the words are formed.

## **B. The Concept of Morphological and Morphophonemic Processes**

A morphological process is a process of changing a stem to adjust its meaning to fit its syntactic and communicational context. Bybee (1985: 129) says morphological study is the process in which a word is analyzed into its root word and associated morphemes. For the purpose of analysis of morphologically rich languages, the root and the morphemes of each word has to be identified. Morphological that undergo similar morphophonemic or morphological processes are also in the domain of lexical connection. For instance, the semi-productive *Strong* Verb class in English, exemplified by the verb *string*, *strung*, is defined a clustering of lexical connection.

Morphophonemic also changes the form of morpheme is based on the sounds surround it which relates to the correlation between morphemes and phonemes. In addition, morphophonemic process related to the affixation processes, there is a term called morphophonemic processes (Fromkin, 1990: 141). The term morphophonemic processes is derived from two words, they are “morpheme” and “phoneme”. The word Morphophonemic refers variation in the form of morphemes because of the influence phonetic factor or the study of this variation (Longman). However, Dobrovolsky and Aronoff (1996:230) have different idea about morphophonemic definition. They state that rules that account for alternations among allomorphs

(morphophonemic alternations) are called morphophonemic rules. In short, morphophonemic characteristics may include alternations, the overlap and truncation of morphemes, stress shifts, and so on. Recognizing them is important for describing the morphological structure of a word, for determining the specific nature of the grammatical structure of a language and for comparing languages according to their typology.

Therefore, Klavans in O'Grady (1996: 671) says most morphologically conditioned changes in written English involve spelling, with some changes in stems, and some truncation rules. Examples are stop/ stopped, sing/ sang, and tolerate/ tolerant. In general, morphological variations in English are not as opaque as in other languages. Some languages, such as German, have very productive compounding whereas others have infixation and reduplication, or complex stem changes. Words altered by morphological processes can not be easily recognized by a natural language processor unless they are properly related to their bases for lexical look up.

Basically, there are seven English morphological processes, which are affixation (that includes prefixation and suffixation), vowel change, root consonant change, suppletion, conversion, compounding, and the most uncommon, reduplication. Affixation is the morphological process whereby an affix is attached to a root or stem. First, based on Katamba (1993:44), an affix is a morpheme, which only occurs when it is combining to some other morpheme or morphemes such as root or stem or base. There are three types of affixes: prefix, suffix, and infix. Second, phonological rules may add or delete entire segment. These are different from the

feature-changing and feature adding rules which affect only parts of segments (Fromkin et al, 2007: 278). The addition of feature is other way to see the features change. Third, the status of conversion as a morphological process on a part with compounding, affixation, reduplication or modification is not clear. If morphology is the study of the systematic aspect of complex words, it is just a word-class exchange.

Then, Zaim (2008: 98) states compounding is a word formed by the combination of two independent words. The parts of a compound can be free morpheme, derived words, or other compounds. For example, girl friend, air conditioner, and lifeguard chair. Suppletion is the exception to all of the processes that can be represented by two different words which do not have any systematic difference in form. The last one is reduplication. Reduplication is relatively common in onomatopoeic expressions, such as in English: *quack-quack*, *cuckoo*, *bow-wow*. According to Zaim (2008: 98), the total reduplication occurs only sporadically and it usually indicates intensity in English. In reduplication either all of a morpheme is doubled (total reduplication) or part of it is.

In other point of view, the process of morphophonemic also experiences assimilation and dissimilation. Fromkin et al (2007: 274) states assimilation rule makes neighboring segments more similar by duplicating a phonetic property. Therefore, Refnaldi (2008: 157) says in assimilatory process a segment takes on features from a neighboring segment. A consonant may pick up features from a vowel may take on features of a consonant, one consonant may influence another, or one vowel may have an effect on another. On the other hand, dissimilation is the



combination of two segments and the sound is less similar. This opinion is supported by Fromkin (2007: 277) who said that the process of dissimilation happens when a segment become less similar to another segment.

### **C. The Study and Processes of Word Formation**

All the units of linguistic analysis, words are the most familiar. Lanh (2006) states “A word is a unit of language that carries meaning and consists of one or more morphemes which are linked more or less tightly together, and has a phonetic value.” Words in English are formed from morphemes: free morphemes and bound morphemes. A free morpheme is one that can be uttered alone with meaning, such as read, want, free. A bound morpheme is one that cannot be uttered alone with meaning. However, Zaim (2008: 53) states “a word is a free form that cannot be divided wholly into smaller free forms.” Therefore, the word has been defined as a freestanding element of language that has meaning (McCarthy in Tahaine 2010 ), as opposed to all sorts of bound forms in a language. Then, words are dealing with morphologically complex words. It means that words have its own internal structure. It is created and increased every time, and sometimes the existing word is created into a new one. This process is called word formation processes.

#### **1. Basic Concept of Word Formation**

Word formation is included to the morphological study. Word formation is the creation of new words. Bauer (1983) says, “Word formation deals with the

formation of new lexemes”. These processes enlarge the vocabulary and therefore create new lexemes. By dividing the phrase word formation processes into its components the term almost explains itself, namely the processes of the formation of words, thus this may be a very appropriate definition. It is necessary to mention at this point that word formation is generally divided into two main groups; the first group includes affixation (derivation), compounding and conversion which are considered predictable formations, whereas the second group includes the unpredictable formations such as clipping, blending, and acronyms.

In other point of view, Plag (2002: 12) states that the term word formation is dealing with the formation of words. For example, inventor, greenhouse, inability, team manager, meaningless, and truck driver, these are the word that include to the process of word formation. Those words are obviously composed by putting together smaller elements to form larger words with more complex meanings. Moreover, Zaim (2008: 95) in *English Morphology* defines word formation as the process of creation of new word. By examining the processes involved in the creation of new words, people may be able to discover basic and general principles of word formation.

To sum up, word formation is the study of words, dealing with the construction or formation rules of words in a certain language. Then, word formation is the construction of new words from existing words and the process of constructing new words from existing material. For instance taking *happy* as an example; prefixation of *un-* derives *unhappy*, suffixation of *-ness* *happiness*, and

compounding *trigger-happy* and *happy hour*. There are many ways of constructing new words.

## 2. Word Formation Processes

There are several definitions of word formation from the experts. First, O'Grady and Guzman (1996: 143-159) say word formation processes consist of reduplication, compounding (*campsite*, *street light*), derivation, (*seller*, *writer*), conversion, clipping (*doc*, *ad*, *auto*, *demo*, and *loco*), bends (*smog* from *smoke* and *fog*), backformation (*housekeep* from *housekeeper*, *enthuse* from *enthusiasm*), acronyms (UNICEF for *United Nations International Children's Emergency Fund*), and onomatopoeia (*buzz*, *hiss*, *sizzle*, and *cuckoo*).

Besides, Indonesian language also has word formation processes. Abdul Chaer explains in his book *Linguistik Umum* (General Linguistics) in 2003, Indonesian has some word formation processes consist of several processes. Those processes are *derivatif* (derivation), *komposisi* (compounding), *konversi* (conversion), and *pemendekan* (clipping).

Thus, Parker and Riley (2005) in their book entitled *Linguistics for Non-Linguists* divided the process of word formation into eleven processes. They are derivation (orient + -ion => *orientation*), category extension, compound (put-down), root creation (*Kodak*), clipped form, blend, acronym, abbreviation (TV < television) , proper name (*hamburger* < *Hamburg*), folk etymology (*cockroach* < *Spanish cucuracha* 'wood louse'), and back formation(*burgle* < *burglar*).

According to George Yule in *The Study of Language* (2006: 52), word formation processes are the process evolution of new words and new uses of old words as a reassuring sign of vitality and creativeness in the way a language is shaped by the needs of its users. For example, *WWW* is derived from *World Wide Web* after undergoing the process of acronyms, in which a word is formed by the initial of some words. Yule told that word formation processes consist of coinage, borrowing, compounding, blending, clipping, back-formation, derivation, conversion, dipping, blending and acronym.

Then, Fromkin *et al* (2007: 92-98) states that there are six types of words formation processes. They are derivation (*fantastic*, *astronomic*, *happily*, *lazily*), word coinage (*Xerox*, *Kleenex*, *Jell-O*), back-formation (*hawk* become *hawker*, *edit* become *editor*), compounds (*overtake*, *hanger-on*, *sundown*), blend (*broadcast*, *iPOD*, *podcast* (*podcasting*, *podcaster*), and reduced words {clipping (*piano* from *pianoforte*, *bus* from *omnibus*, and *van* from *caravan*) and acronyms (*NASA* from *National Aeronautics and Space Administration*)}

Meanwhile, Minkova and Stockwell (2009: 7-21) in the book *English Words* classified the types of new words into two groups. The specific groups in the creation of new word are regular word-formation and new word creation. There are three types in regular word-formation, which are derivation by affixation (*activate*, *activation*, *actively*, *activeness*, *activity*), derivation without affixation (*to history*, *to perhaps*, *to maid*, *to ditty*, and *to dead*), and compounding (*holiday* from *holy day*, *good bye* from *God be with you*, *hussy* from *house wife*, and *nothing* from *no thing*). However, in new word creation can be classified into six processes. They are creation *de novo* (*Kodak*, *Nylon*, *Orlon*, and *hanky-panky*), blending (*brunch* from *breakfast* and *lunch*, *flurry* from *flutter* and *hurry*, *sunbrella* from *sun* and *umbrella*), clipping (*quiz* from *inquisitive*, *phone* from *telephone*, *ad* from *advertisement*), back-formation (*cherry* is a back-formation from *cherise*), initialism (*CD-ROM* stands for *compact disk read-only memory* or *JPEG* stands for *Joint Photographic Experts Group*), and the last one is eponyms (*boy*, *doctor*, *house*, *town*).

From the explanations above about word formation and the processes, there are several different word formation processes in which new words are introduced into the English language. Each theory is used to find out the morphological processes of construction of new words in computer terms. The followings are the explanation of the word formation processes:

#### **a.) Derivation**

Chaer (2003) says that this *derivatif* (derivation) is the process usually creates new word for example the word makan (to eat) can become makanan (food) or main (to play) become permainan (game). In other sides, Yule (2006: 57-58) states that this process is the most common word formation process to be found in the production of new English words. Derivation is accomplished by means of a large number of small 'bits' of the English language which are not usually given separate listings in dictionaries. These small 'bits' are generally described as **affixes**, for example *un-*, *mis-*, *pre-*, *-ful*, *-less*, *-ish*, *-ism* and *-ness* which appear in words like *unhappy*, *misrepresent*, *prejudice*, *joyful*, *careless*, *boyish*, *terrorism* and *sadness*.

Moreover, according to Zaim (2008: 101), English has a number of derivational morphemes which use to derive words. There are prefixes (added to the beginning of a stem) or suffixes (added to the end of a stem). Some common suffixes are: *-ly*, *-ness*, *-y*, *-er*, *-ity*, *-ation*, and *able*.

#### **b.) Compounding**



Compounding is the combination of words and the word may be the existing words. In English, new word can be formed from already existing words by a process of compounding. Compounding is existing words that individual words are joined together to form a compound word. For example, the noun *ape* can joined with the noun *man* to form the compound noun *ape-man* (Akmajian, 2001: 32).

Moreover, Yule (2006: 54) says “Compounding is a joining of two separate words to produce a single form.” Then, Fromkin *et al* (2007: 95) emphasize that compounding is two or more words may be joined to form new. He also adds that compound is variously spelled with dashes, spaces, or nothing between the individual words. Common English compound are *bookcase*, *doorknob*, *fingerprint*, *sunburn*, *textbook*, *wallpaper*, *wastebasket* and *waterbed*. All these examples are nouns, but we can also create compound adjectives (*good-looking*, *low-paid*) and compounds of adjective (*fast*) plus noun (*food*) as in *a fast-food restaurant* or *a full-time job*. However, Zaim (2008: 101) states that compounding is two or more existing words are put together to form a new word.

### **c.) Word Coinage**

Coinage is the invention of totally new terms or words which can possibly come from to the new uses. Fromkin *et al* (2007: 92) states that the new words are created outright to fit some purpose. The advertising industry has added many words, such as *Kleenex*, *Teflon* and *Xerox*. *Specific brand names such as*

*Jell-O, Brillo, and Vaseline* is sometimes used as the generic name for different brands of these products. He also said that in computer speech processing, the new words *cepstrum* and *cepstral* were purposely formed by reordering the letters of *spectrum* and *spectral*.

#### **d.) Blending**

Blending is a combination of the parts of two words, usually the beginning of one word and the end of another. Blending is the combination of two separate forms to produce a single new term (Yule, 2006: 55). However, blending is typically accomplished by taking only the beginning of one word and joining it to the end of the other word. Some examples are gasoline, but are made from *akohol*, so the 'blended' word for referring to this product is *gasohol*. To talk about the combined effects of *smoke* and *fog*, we can use the word *smog*. In places where they have a lot of this stuff, they can jokingly make a distinction between *smog*, *smaze* (smoke + haze) and *smurk* (smoke + murk). Some other commonly used examples of blending are *bit* (binary/digit), *brunch* (breakfast and lunch), *motel* (motor/hotel), *telecast* (television/broadcast) and the *Chinni* (Channel/tunnel), connecting England and France.

#### **e.) Clipping**

Clipping is the process shortens the words without paying attention to the derivation morphology of the word. Fromkin *et al* (2007: 98) define

clipping as a simple way. They state “Clipping is the abbreviation of longer words into shorter ones.”

Based on Yule (2006: 55), the element of reduction that is noticeable in blending is even more apparent in the process described as dipping. This occurs when a word of more than one syllable (*facsimile*) is reduced to a shorter form (*fax*), usually beginning in casual speech. The term *gasoline* is still used, but most people talk about *gas*, using the dipped form. Other common examples are *ad* (advertisement), *cab* (cabriolet), *fan* (fanatic), *flu* (influenza), *perm* (permanent wave), *phone*, *plane* and *pub* (public house). English speakers also like to clip each other's names, as in *Al*, *Ed*, *Liz*, *Mike*, *Ron*, *Sam*, *Sue* and *Tom*.

#### **f.) Back formation**

Yule (2006: 56) says a very specialized type of reduction process is known as backformation. Typically, a word of one type (usually a noun) is reduced to form a word of another type (usually a verb). Some examples of words created by this process are: *donate* (from 'donation'), *emote* (from 'emotion'), *enthuse* (from 'enthusiasm'), *liaise* (from 'liaison') and *babysit* (from 'babysitter'). Then, Fromkin et al (2007: 94) says that a new word may enter the language because of an incorrect morphological analysis. For example, *peddle water* derived from *peddler* on the mistaken assumption that the *-er* was agentive suffix. This

process is called backformation.

#### **g.) Conversion**

Yule (2006: 56) says that conversion is a change in the function of a word, as for example when a noun comes to be used as a verb (without any reduction). Other labels for this very common process are 'category change' and 'functional shift'. A number of nouns such as *bottle*, *butter*, *chair* and *vacation* have come to be used, through conversion come to be used as verb as in the following examples: *We bottled the home-brew last night Have you buttered the toast?; Someone has to chair the meeting; They're vacationing in Florida.*

The conversion can involve verbs becoming nouns, with *guess*, *must* and *spy* as the sources of a *guess*, *a must* and *a spy*. Beside that, adjective, such as *dirty*, *empty*, and *crazy*, can become the verbs *to dirty*, *to empty*, or the noun *to crazy*.

#### **h.) Acronyms**

These words are formed by taking the initial sounds (letters) of the words or new words of a phrase and uniting them into a combined which is itself pronounceable as a separate word. Akmajian et al (2001: 25) state acronym formation is just one of the abbreviation, or shortening, processes that are increasingly common in American society (and perhaps internationally) as means of word formation. In addition, they said that it is important to note that even though such words are originally created as acronyms, speakers quickly forget

such origins and the acronyms become new independent words. The word of computers offers wealth acronyms.

Moreover, Fromkin et al (2007: 98) state that acronyms are derived from the initials of several words. Such words are pronounced as the spelling indicates: RAM from “random access memory”. The acronyms process is forming new words form from the initial letters of a set of other words (Yule, 2006: 57). These new words can be forms such as *CD (compact disk)* or *VCR (video cassette recorder)* where the pronunciation consists of saying each separate letter. More typically, acronyms are pronounced as new single words, as in NATO, NASA or UNESCO, but many acronyms lose their capitals to become everyday terms such as laser (light amplification by stimulated emission of radiation), radar (radio detecting and ranging), scuba (self contained underwater breathing apparatus) and zip (zone improvement plan) code.

#### **i.) Borrowing**

Yule (2006: 54) defines borrowing as the taking over of words from other languages. Throughout its history, the English language has adopted a vast number of words from other languages, including *croissant* (French), *dope* (Dutch), *lilac* (Persian), *piano* (Italian), *pretzel* (German), *sofa* (Arabic), *tattoo* (Tahitian), *tycoon* (Japanese), *yogurt* (Turkish) and *zebra* (Bantu).

#### **j.) Reduplication**

Reduplication is the process of forming a word by reduplicating the morpheme (Kridalaksana, 1989: 88). There are five kinds of morphemic reduplication: *dwipurwa*, *dwilingga*, *dwilingga salin suara*, *dwiwasana*, and *trilingga*. *Dwipurwa* is reduplicating the first syllable of the lexeme with weak vocal for instance: *tetangga*, *lelaki*, *tetamu*, *sesama*. Meanwhile, *dwilingga* is reduplicating the lexeme (total reduplication) for example: *rumah-rumah*, *makan-makan*, *pagi-pagi*. Then, *dwilingga salin suara* is reduplicating the lexeme by changing the phoneme for instance: *mondar-mandir*, *pontang-panting*, *coat-coret*. *Dwiwasana* is reduplicating the final syllable of the lexeme, for example: *pertama-tama*, *perlahan-lahan*, *sekali-kali*. The last one is *trilingga*. It is reduplicating onomatopoeia three times by the changing phoneme, for example: *cas cis cus*, *dag dig dug*, *ngak, ngek, ngok*, *dar der dor*.

#### **k.) Multiple Processes**

Although we have concentrated on each of these word-formation processes in isolation, it is possible to trace the operation of more than one process at work in the creation of a particular word. For example, the term *del* seems to have become a common American English expression via a process of first borrowing *deicateness* (from German) and then clipping that borrowed form (Yule, 2006: 58-59).

From those theories above, there are some similarities and differences in the processes of word formation. However, the researcher uses all of the types of word

formation processes in analyzing the process of word formation in computer terms because it explains plainly the word formation processes that the writer requires. Then, the processes are related to the term of the computer terms that also has a link to the creation of new words in technology. Furthermore, the sources of this research are from Indonesian computer tabloid, *PC Mild* tabloid, which the language is in Indonesian. In this research, the researcher will analyze the words used in the computer terms and how these are constructed.

#### **D. The Function of Word-Formation**

Each word belongs to a grammatical category which has function in every sentence. For example *daffodil* is a noun, *compute* is a verb, *famous* is an adjective, *up* is a preposition, and *quickly* is an adverb. A word such as *daffodil* shares various properties with the word *disk*. For example, the plural suffix *-s* can be attached to each of these words, to form the plural *daffodils* and *disks*. Though, there are exceptions, for instance, irregular plurals (*children* and not *childs*) and mass noun (*rice* and not *rices*)- most nouns can be pluralized in this fashion, whereas a word such as *famous* cannot be. Thus, there exists morphological evidence for distinguishing nouns from words belonging to other categories Akmajian *et al* (2001: 19-20).

They also added that the grammatical properties of a given part of speech class are quite specific to a given language or small group of languages. For example,

the property particular to nouns of taking a plural suffix, which defines English nouns, obviously cannot be used as a general defining property for noun across languages. In other languages, the plural form for nouns is derived by a process known as reduplication, in which a specific part of the singular form is reduplicated (repeated) to construct the plural form.

Word formation has two functions, firstly a function of lexical enrichment, whereby new words are coined to denote new, or newly salient, concepts, and secondly a transpositional function, whereby lexemes are permitted to appear in a new word class so that the same meaning can be transferred to a new function in a sentence (Bauer in Henk Aertsen, Mike Hannay & Rod Lyall (eds), 2004, 283-292).

One function of word-formation is to allow words (in some vague interpretation of the term) to appear in different word classes in different sentence functions. Inflectional morphology is that morphology which is relevant to syntax. The implication seems clear: word-formation is (or can be, or is at least some of the time) a matter of inflectional morphology. The only difficulty with this conclusion is that it flies in the face of all that we have been taught: word formation deals with derivational morphology, compounding and some rather less central processes, but not with inflection; anything which changes word class is derivation.

Morphology leads not to a change of word-class but to a change of sub-type of word-class, in particular valency-changing morphology for verbs (causatives, intransitivisers, transitivisers). These are rare in English, where such changes are not usually morphologically marked (e.g. *The dog walked, I walked the dog; Flowers*



*grow on this bank, I grow flowers*). Things such as the change from *king* to *kingdom*, *kitchen* to *kitchenette*, and *biography* to *biographee* are excluded from this category since the affixes carry more meaning than simply the grammatically specified output class of noun here, but it may well be the case that some instances are difficult to classify. We can label this type by its core members and call it ‘valency-changing’, though a better label would be preferable. I assume that changes of countability in English nouns would fit into this category if they were morphologically marked.

#### **E. A Brief of Computer Terms**

The development of the computer can effect to the language. Most of the computer words involve to the process of word formation. All computers contain a central processing unit that interprets and executes instructions; input devices, such as a keyboard and a mouse, through which data and commands enter the computer; memory that enables the computer to store programs and data; and output devices, such as printers and display screens, that show the results after the computer has processed data. Kothari (2004: 361) says computer is certainly one of the most versatile and ingenious developments of the modern technological age. Computer is a machine capable of receiving, storing, manipulating and yielding information such as numbers, words, and pictures.

Term is a word or word-combination which denotes the notion of a special realm of communication in science, industry, technology, art, in a definitive field of

knowledge and human activity which is a special purposes linguistic unit (Rusko, 2010). Computing terminology is understood to be a unity of terms which makes up a special system of terminological lexis in English. Terminological system as a unity of terms is being formed up on the basis of one concept and reflects the relations between the concepts of a definite realm of science and technology (Лейчик 2007 in Rusko 2010).

Thus, the computer terms changes rapidly; a whole new vocabulary continues to evolve. The words or terms of the computer are most often used. Numerous individuals and organizations regularly used the words from the computer to communication or even discuss about the invention of the new computer terms in daily life such as in the offices, factories, universities and even schools. It proved that word formation processes in computer terms happen because of the discovery of new computer technology.

Computing terminology is an example of young terminology: being formed in the middle of the 20th century it is still in the process of active development. The dynamic character of computing terminology makes it suitable for the study of means of linguistic nomination. A survey of system character of computing terminology seems important for the practice of English language teaching, ensures better understanding and mastering of the terms, improves the efficiency of academic performance (Rusko, 2010).

#### **F. PC Mild Tabloid**

In the newspaper industry, the term tabloid refers both to a specific type of newspaper, and to a specific paper size. Tabloid is essentially half the size of the larger broadsheet format, making it much more compact and easy to handle. The precise paper size can vary slightly, depending on the nation and the newspaper involved. Fleming *et al* (2006) say that national tabloids tend to rely on brash headlines and large, dramatic pictures to hook their readers. They are written in simple and direct language to appeal to as wide a readership as possible, and beyond the front page, they tend to focus on human interest stories with a lot of celebrity gossip and show business news.

PC Mild tabloid is the most popular computer tabloid in Indonesia. Most of the content of this tabloid is about the new information about computer technology. It is published once in two weeks and published by Pinpoint Publication in Jakarta. Pinpoint Publications also published a computer magazine every month that is PC Media. Williams (2011) says “A Media Center PC is not practical for most of us. It's not so much driven by technology meeting opportunity as it is driven by big company marketing wanting a foothold in your family room”. The language that use in this tabloid is Indonesian, but there are many terms of computer that use English word formation.

## **G. Related Studies**

There were several studies on word formation processes that have been conducted. First, Herdina (2011) conducted a study on word formation processes which entitled *The Word Formation Processes of Indonesian Slang and Colloquial*

*words found in Youths' Comments in Facebook*. In her study, she found 5 classes of words. They are noun, adverb, verb, adjective, pronoun and conjunction. Besides, she also found 5 word formation processes that formed Indonesian slang words namely clipping, blending, acronym, borrowing, and multiple processes. Then, Indonesian colloquial words were also formed by 5 processes, such as clipping, affixation, internal change, borrowing, multiple processes, and affix reduction.

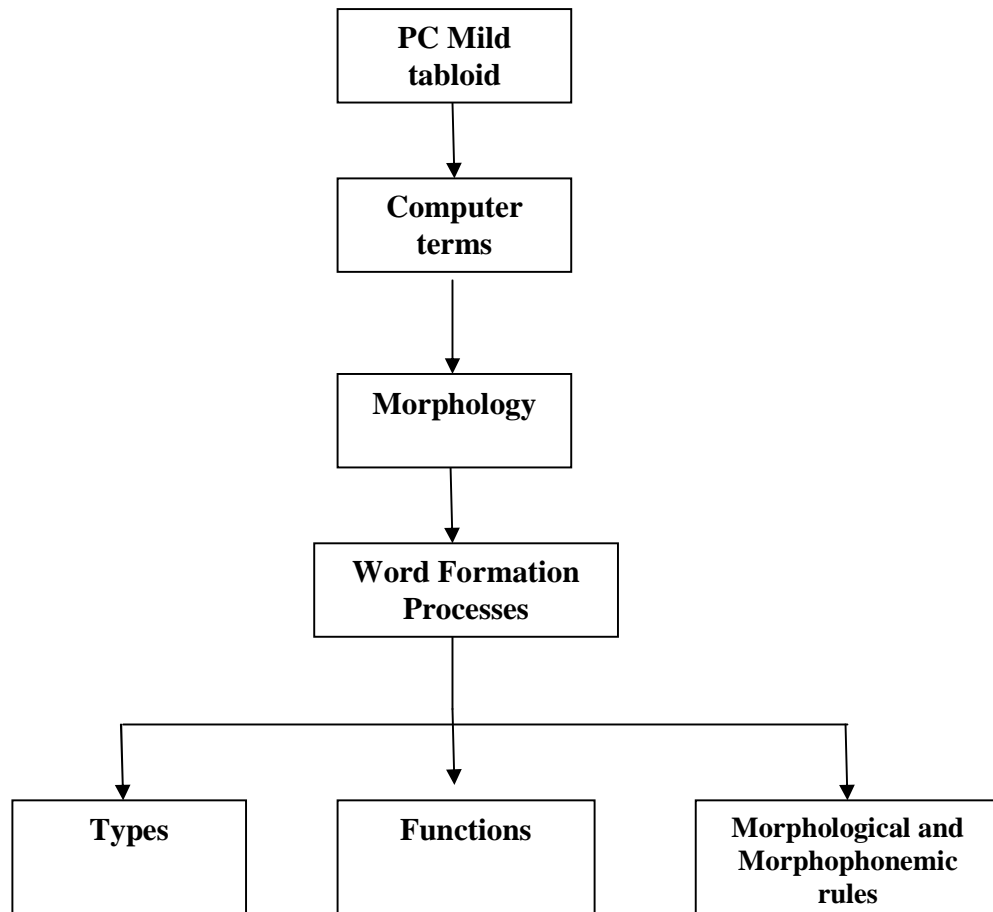
Second, Tuti (2007) did the research on word formation. The title of her research was *An Analysis of Word Formation of Language Used in SMS Sent by the English Department Students*. The objective of this research was to identify the types and the processes of word formations of language used in SMSs sent by English Department students. She explained that the new simplification process had any kinds of different forms, they were in the forms of deleting all vowels, deleting 1 vowel, deleting 2 vowels or more, taking the first letter of first syllable and first and last letter of second syllable, taking the first and last letter of second syllable, taking the first letter of affixation, deleting vowel /a/ at the affix /nya/, changing vowels /au/ to vowel /o/, changing vowel /ai/ to vowel /e/, and changing the reduplication to the number.

Then, Nasikah (2005) conducted his study about word formation which title *The Word Formation Processes on English Computer Terms Used in Microsoft Word 2000*. His research gives an idea to the researcher to analyze word formation but with some differences point of view from the focus and the media of the study. The researcher is interested in analyzing the word formation processes in computer terms in PC Mild tabloid but Nasikah was interested in analyzing the word formation

processes on English computer terms used in Microsoft Word 2000. Furthermore, it is different from this previous research which also focused on describing the function of the terms used in Microsoft Word 2000. However, this research will focus on the process of word formation and morphological and morphophonemic process in the computer terms found in the *PC Mild* tabloid.

#### **H. Theoretical/Conceptual Framework**

In analyzing word formation processes in the computer terms that found in *PC Mild* tabloid, this research will be conducted by following several steps. First, identifying words used in the computer terms in *PC Mild* tabloid, separating the word based on the process of word formation and counting which one of the word formation is dominant in the computer terms, and analyzing why does the type is commonly used in the computer terms. Thus, the researcher formulates a scheme to explain how this study will be done. The schema below explains how the research has been done conceptually.



## **CHAPTER V**

### **CONCLUSIONS AND SUGGESTIONS**

#### **A. Conclusions**

One of the characteristic of language is changed and increased a number of vocabulary. Computer term and media communication of technology are the cause why the language is developed in society. There are some types and processes of constructing the new word of computer terms. They are acronym, compounding, derivation, clipping, blending, coinage and even multiple processes. Those processes are called by word formation processes.

English word formation in the computer terms found are in the following forms. First, the greater number of words are found in English word formation is acronym. The next process is compounding, multiple processes, derivation, coinage and blending, and back-formation. Computer terms have a number of the acronym process, such as URL (pronounced “earl”) stand for uniform resource locator; DOS (pronounced “doss”) stand for disk operating system.

The second way to create the new word is compounding. Compounding is the combination of words and the word may be the existing words. Compound is variously spelled with dashes, spaces, or nothing between the individual words. The examples of compounding are anti virus (N) [Anti (V) + virus (N)], back-bone (N) [back (Adj) + bone (N)], Bluetooth (N) [Blue (Adj) + tooth (N)],

Chiptune (N) [Chip (N) + tune (V)], Download (V) [Down (Adj) + load (V)] and others.

The computer terms that were found in PC Mild tabloid also formed by Indonesian word formation and undergo the changing of morphological and morphophonemic. Morphophonemic is the branch of linguistics that studies the morphological use of phonological means. It is the changes of phoneme as a result from the merging of one morpheme and another. Some of the processes are affixation, dissimilation, assimilation, changing vowel and consonant, addition, reduplication and compounding.

## **B. Suggestions**

The researcher has analyzed and identified about word formation processes in the computer terms. In this research, the researcher only analyzed the types, functions, morphological and morphophonemic processes in computer terms found in PC Mild tabloid. There are a lot of field that can be studied in computer terms. So, the researcher strongly suggest that the next researcher conduct about the computer terms in other aspect especially in word formation, so that it can be found the more complete word formation processes in the computer terms.

Besides, the researcher also suggest that there will be other researchers who deeply research other aspects on computer terms, besides its word formation. Probably, the computer terms can be analyzed from semantics and syntax aspect. Specifically, the further studies about computer terms might be its uses and



distribution, tendencies of the construction of word in the computer terms, and how the computer terms are developed day by day. Therefore, the researcher hopes this study will be useful for further analysis in the computer terms.

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