

E-BANJAR BALI, POPULATION CENSUS MANAGEMENT INFORMATION SYSTEM OF BANJAR IN BALI BY USING FAMILY TREE METHOD AND BALINESE CULTURE LAW

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ABSTRACT

This paper describes how population census in Balinese traditional village i.e. *banjar* are managed. This kind of information system is known as *e-Banjar Bali*. A case study was conducted in *Banjar Padang Tegal Tengah*, a *banjar* in Ubud, Bali regarding to the information system. This population information system uses website as its basis. The study was done to find an easier population census management. Managing family tree, calculating total population, indigenous and non-indigenous people, active and non-active population, natality and mortality are inclusive in the census. Additional feature included as a part of this information system is management upon *banjar* organizational data and information spreading among the society. This particular information system is expected to minimize the use of paper or manual execution of population census.

Keywords: *Banjar, Population, Management, Family Tree, Balinese Culture Law*

1. INTRODUCTION

Balinese culture is widely known in the world. Its traditional customs, cultures, and arts become a unique trait for Bali Island itself. The other unique trait is the way how Balinese manage its population. Balinese societies live in a special system called *banjar*. *Banjar* is an administrative division under the governance of sub-district or village in Bali Province, Indonesia.[1]

Banjar is a term to refer to a unity of society bounded by law which governs the region borders in controlling and ruling local society needs – based on its local customs that has been acknowledged and respected by Indonesian government.[6]

Banjar is ruled by a traditional village. Traditional village is governed by sub-district. Each sub-district might consist of some traditional villages. Every traditional village might have several *banjar*.

Sub-district	
Traditional Village A	Traditional Village B
Banjar 1 of Traditional Village A	Banjar 1 of Traditional Village B
Banjar 2 of Traditional Village A	Banjar 2 of Traditional Village B
Traditional Village C	Traditional Village D
Banjar 1 of Traditional Village C	Banjar 1 of Traditional Village D
Banjar 2 of Traditional Village C	Banjar 2 of Traditional Village D

Figure 1: Scheme Of Banjar In Bali

Population management in Bali is totally different from other area in Indonesia because of the existence of *banjar* itself. The differentiation of societies that appears in two resident statuses – *penduduk dinas* and *penduduk adat* – is the uniqueness of this particular population management. A person could possess one or two resident status. *Penduduk dinas* is a resident status that is nationally acknowledged in the country.[4]

Penduduk adat refers to a person who possesses traditional or indigenous status based on the local custom in their neighborhood.[12]

Penduduk dinas and *penduduk adat* were formed because there are two types of living status in Bali i.e. *banjar dinas* and *banjar adat*. *Banjar dinas* is a compulsory social organization which should be possessed by every people in particular *banjar* – as national administrative affairs managed in *banjar dinas*. [7] *Banjar adat* refers to *banjar* status living – that i.e. owned by indigenous people – where any traditional affairs (mortality, *odalan*, and marriage) and other *banjar* local affairs are usually taking place.[5]

A family in *banjar* area is often illustrated with a tree and its branches that grow over time. Thus, this system is called lineage or family tree. This family tree will have more branches as new members enters. Then, relationships among the members of a family should be clearly defined so that personal identity can be known completely. This is in line with the purpose of calculating population.

At one *banjar* in the population, those cases have certainly occurred as marriage, divorce, death, birth, natives and immigrants, community organizations, and dissemination of relevant information on population.

Population data collection during years are addressed by using the book (manual data collection). The data entry by using this type is very simple to use but would be inefficient for data processing and dissemination of population information.



Figure 1: Population And Activities Archive Of Banjar Padang Tegal Tengah Ubud 2013

Over the development period, in the *banjar* population census has been put on Ms. Office Excel. Data processing is handled by the software. But, not everyone can operate and use the existing formulas on the software.

NO	A	B	C	D	E	F	G	H	I	J	K	L	M	N
NO	NAMA LENGKAP	LN	STATUS PERKAWINAN	TEMPAT LAHIR	TANGGAL L.AHIR	AGAMA	PEND. TER. AKHIR	DPT. BACA HURUF	PEKERJAAN	KELOMPOK A.D.M. KLG	NIK	NOMOR KK	K	
1	1	2	3	4	5	6	7	8	9	10	11	12	13	14
2	1	IDA ADU OKA	P	JANDA	GANJAR	12/10/1980	SD	DAPAT	PEDAGANG	KEP KEL	22.0594.711232.0014	220594711232	1	
3	2	IDA BGS PT SUBARANA	L	BEL. KAWIN	GANJAR	07/10/1980	SMA	DAPAT	PELUKIS	AJK	22.0594.711232.0012	220594711232	2	
4	3	IDA BGS MD DIBAGATASA	L	BEL. KAWIN	GANJAR	04/10/1980	SMA	DAPAT	SWASTA	AJK	22.0594.711232.0010	220594711232	3	
5	4	IDA ADU NYOMAN SATANG	P	BEL. KAWIN	GANJAR	12/10/1980	SD	DAPAT	IRT	gkr	22.0594.711232.0014	220594711232	4	
6	5	IDA ADU KETUT RAHA	P	BEL. KAWIN	GANJAR	12/10/1980	SD	DAPAT	PEDAGANG	gkr	22.0594.711232.0014	220594711232	5	
7	6	IDA BGS RAU KAWIN	L	KAWIN	GANJAR	12/10/1980	SD	DAPAT	SWASTA	KEP KEL	22.0594.711232.0014	220594711232	6	
8	7	IDA BGS OKA	L	KAWIN	GANJAR	12/10/1980	SD	DAPAT	SWASTA	KEP KEL	22.0594.711232.0014	220594711232	7	
9	8	IDA BGS OKA	L	KAWIN	GANJAR	12/10/1980	SD	DAPAT	SWASTA	KEP KEL	22.0594.711232.0014	220594711232	8	
10	9	IDA BGS OKA	L	KAWIN	GANJAR	12/10/1980	SD	DAPAT	SWASTA	KEP KEL	22.0594.711232.0014	220594711232	9	
11	10	IDA BGS OKA	L	KAWIN	GANJAR	12/10/1980	SD	DAPAT	SWASTA	KEP KEL	22.0594.711232.0014	220594711232	10	
12	11	IDA BGS OKA	L	KAWIN	GANJAR	12/10/1980	SD	DAPAT	SWASTA	KEP KEL	22.0594.711232.0014	220594711232	11	
13	12	IDA BGS OKA	L	KAWIN	GANJAR	12/10/1980	SD	DAPAT	SWASTA	KEP KEL	22.0594.711232.0014	220594711232	12	
14	13	IDA BGS OKA	L	KAWIN	GANJAR	12/10/1980	SD	DAPAT	SWASTA	KEP KEL	22.0594.711232.0014	220594711232	13	
15	14	IDA BGS OKA	L	KAWIN	GANJAR	12/10/1980	SD	DAPAT	SWASTA	KEP KEL	22.0594.711232.0014	220594711232	14	
16	15	IDA BGS OKA	L	KAWIN	GANJAR	12/10/1980	SD	DAPAT	SWASTA	KEP KEL	22.0594.711232.0014	220594711232	15	
17	16	IDA BGS OKA	L	KAWIN	GANJAR	12/10/1980	SD	DAPAT	SWASTA	KEP KEL	22.0594.711232.0014	220594711232	16	
18	17	IDA BGS OKA	L	KAWIN	GANJAR	12/10/1980	SD	DAPAT	SWASTA	KEP KEL	22.0594.711232.0014	220594711232	17	
19	18	IDA BGS OKA	L	KAWIN	GANJAR	12/10/1980	SD	DAPAT	SWASTA	KEP KEL	22.0594.711232.0014	220594711232	18	
20	19	IDA BGS OKA	L	KAWIN	GANJAR	12/10/1980	SD	DAPAT	SWASTA	KEP KEL	22.0594.711232.0014	220594711232	19	
21	20	IDA BGS OKA	L	KAWIN	GANJAR	12/10/1980	SD	DAPAT	SWASTA	KEP KEL	22.0594.711232.0014	220594711232	20	

Figure 2: Population Data Of Banjar Padang Tegal Tengah Ubud 2013 Using Ms. Excel

598	S.1 = 109	109
599	S.2 = 8	8
600	TIDAK SEKOLAH = 45	45
601	AKADEMI = 10	10
602	TK = 20	20
603	SL TP = 14	14
604	SPG = 5	5
605	STM = 1	1
606	PGSLP = 1	1
607	SLB = 1	1
608	PEKERJAAN	
609	PEDAGANG = 19	19
610	PELUKIS = 2	2
611	PETANI = 8	8
612	IRT = 67	67
613	SWASTA = 166	166
614	GURU = 30	30
615	PNS = 30	30
616	DOSEN = 11	11
617	PENSIUNAN = 30	30
618	PELAJAR = 147	147
619	PEGAWAI SWASTA = 5	5
620	BURUH = 5	1
621	BURUH = 5	4
622	PEGAWAI HONOR = 1	1
623	SATPAM = 1	1
624	POLISI = 1	1
625		

Figure 3: Population Data Of Banjar Padang Tegal Tengah Ubud 2013 Based On Employment And Education

e-Banjar Bali information system aims to combine both types of data collection before, which is easily operated and efficient in data processing and dissemination of information.

Some cases that can be managed by this population census management information system are patriarch, matriarch, divorce, non-indigenous inhabitant, indigenous inhabitant, natality and mortality, society organization, as well as newest information spreading (e.g. current *banjar* activity, announcement, documentation, and any other information that can be delivered through internet).

The boundary's problem of this case study is on a scale of population census only on one *banjar*.

2. METHODOLOGY

Methodology used in this research was family tree method and combine with interview method towards the head of *banjar* Padang Tegal Tengah

Ubud. This interview is used to collect informations about Balinese culture law. So, methodology used in this research is combination between family tree and Balinese culture law (based on interview with head of *banjar*)

2.1 Family Tree Method

Family tree is a term used to describe lineage showing the line of descent from an ancestor to a person or a family which has a connection towards other people being his wife or relatives.[2] The lineage then describes the relationships among members of a family vertically and horizontally by mentioning the name of the family.[2]

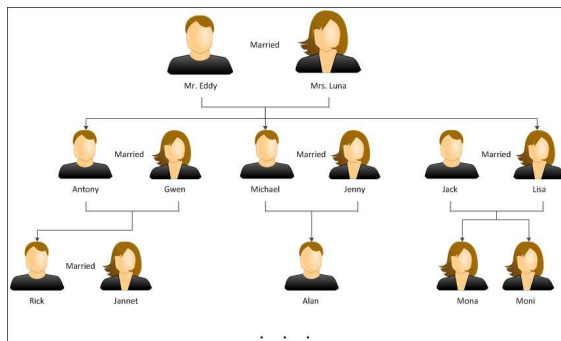


Figure 4: An Example of a Family Tree

Family tree makes the drawing of lineage and observing the descendants, head of household, and inheritors easier.[2] An example above shows that after Mr. Eddy and Mrs. Luna getting married, they have two sons and a daughter. Furthermore, in this case, Mr. Eddy is the head of the household (looking at the husband line or patrilineal system). Meanwhile, his wife and his children are the members of the family. As all of his children got married, there will be three new families. This situation continues on and on.

Residential system in Bali is similar to the family tree system mentioned previously but it is in a slightly different version of the traditional one. Seeing this case, this research was done in *banjar* Adat Padang Tegal Tengah Ubud Bali. For example, Mr. Yoga and Mrs. Yuni got married. They have three sons. Mr. Yoga was the head of the household.

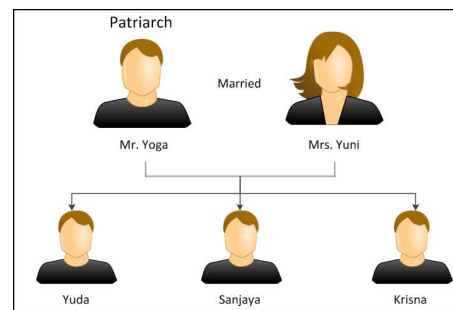


Figure 5: An Example of Family Tree Method

These three sons then got married and have their own wife and children. Since their parents were not productive and active anymore – due to age factor – then the first son had to be responsible for the family. Therefore, the first son in Mr. Yoga's family took the responsibility as the head of the household. Mr. Yoga, Mrs. Yuni, Sanjaya, and Krisna were now under Yuda's responsibility.[9]

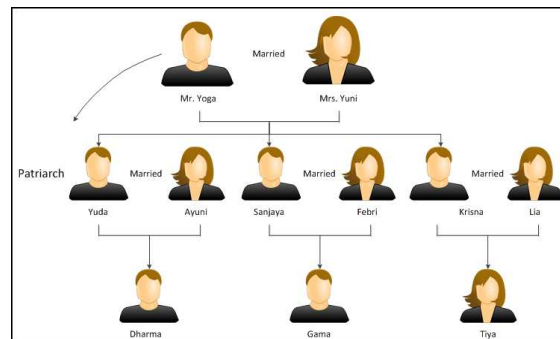


Figure 6: Example Of Family Tree, The Changing Of The Head Of Household In Bali

To make it clearer, an example of family tree system is portrayed in the following case. It can be seen in figure 5.

A house for a big family consists of a couple of old man and woman. They have four sons. Each of their sons has got married. All of them already have their own children. The situation can be described as follows:

- The first couple have a child
- The second couple have a child
- The third couple have three children
- the fourth couple have two children

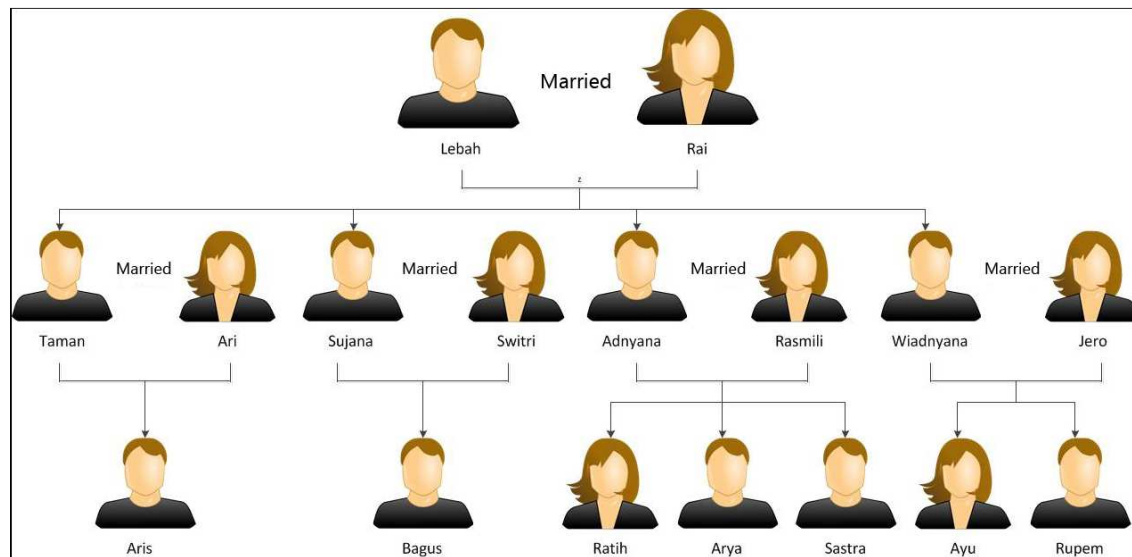


Figure 7: Example of Family Tree (In Detail)

In detail, Mr. Lebah has:

- A wife
- Four sons
- Four daughters-in-law
- Seven grandchildren

If we see it from the child's side (i.e. Taman), it can be said that he has:

- A father and a mother
- A wife
- A child
- Three brothers
- Three sisters-in-law
- Four nephew and two niece

This continuity happens until a lineage of a family appeared. A datum or a person must be related to his/her own family. For instance, Lebah's data should have detailed descend data. This specific condition is also for Lebah's descend data – i.e. his son's data.

The details will be explained in the following design and architecture part.

2.2 Interview with the Leader of the Banjar

An interview with the leader of the *Banjar* was conducted in order to get necessary data for the research. Besides, any other factor concerned in this research was custom-based regulation in managing the population itself. The leader of the *banjar* is known as *Kelihan Banjar* in Balinese. He and his partners have important roles in leading the *banjar adat* affairs such as information spreading, population management, local customs affairs (*ngaben*, religious ceremony, etc.), and other activities that can enhance the *banjar* identity as well as appreciate values exist in the society.

Another interview also was conducted with the leader of ST and PKK. The leader of ST (*Sekeha Teruna* or an organization of non-married people in *banjar*) is considered as the most mature youngster in leading the youth in that *banjar*. Activities that are done by ST such as celebrating *banjar* anniversary, taking parts in many competitions, and creating other youth events.

On the other side, PKK (*Pemberdayaan dan Kesejahteraan Keluarga* or an organization concerns on family welfare and empowerment) refers to a national movement for the purpose of developing the society. This movement comes, aims at, and built for all societies in order to enhance the development of a devout and cautious family. Besides, the family should also be wealthy and independent; have good willing and intention towards others; and concern on gender justice and

wealthy as well as law enforcement and environmentally literate.

Then, those points were investigated and implemented towards the information system by the researchers.

3. SYSTEM OVERVIEW

This part clarifies (1) design and system feature, (2) application of family tree, (3) marriage and divorce in Bali, as well as (4) *banjar* organizer features.

3.1 Design and System Feature

e-Banjar Bali is a web-based application. Its information takes place in online form so it can be accessed anytime and anywhere. In addition, information can be exchanged among the residents, administrators, and village organizers without any space and time boundaries. For instance, when there is important information wanted to be delivered by *Kelihan Banjar*, he can directly gives instructions to the system. Meanwhile, the administrators and members of the system will get the instruction and they will do it immediately. The user gives information in a form of personal data such as KTP (ID card) and SIM (driving license) scan to the system to complete their own identity. Moreover, the admin will insert news, population and other necessary information to the system that the others can easily access. Obviously, all data will run in the load and saved in and to the database.

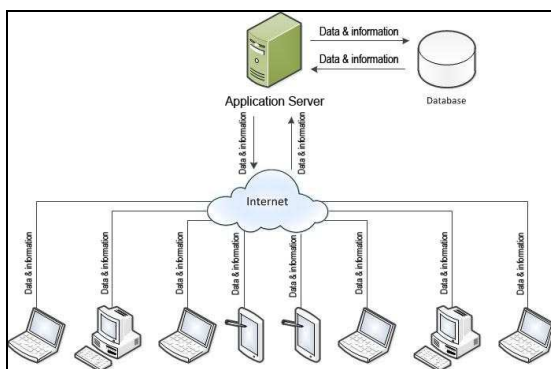


Figure 8: Form of Interaction in *e-Banjar* Bali System

The design of *e-Banjar* Bali population census management information system is divided into three parts namely (1) website page, (2) administrator page, and (3) member page. Website page is a page consists of important information related to *banjar* which will always be updated by the administrator. [3]

Administrator page refers to a page which is used by the administrator to manage the population and other necessary data which is related to *banjar*

itself. The administrator has a right to manage this information system – this is certainly in accordance with the leader of *banjar*'s permission and agreement.

Furthermore, member page is defined as a page for all members of *banjar*. Each member has their own username and password. They do not have the rights to change any existed data which inputted from the registration process. But, all members can see the information and data stored in the system alongwith their digital document uploaded previously such as KTP, SIM, certificate of birth, certificate of marriage, diforce, and so on.

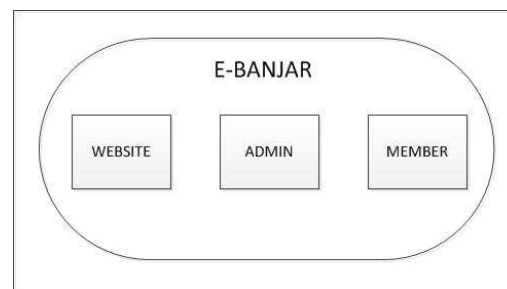


Figure 9: Parts of *e-Banjar* Bali System

Each resident must register themselves to the leader of *banjar* to get their username and password. The username and password will be used to log in to the member page. As the registration process finished, population data is automatically inputted by the administrator. Figure 8 shows an example of marital case where new resident should be registered.

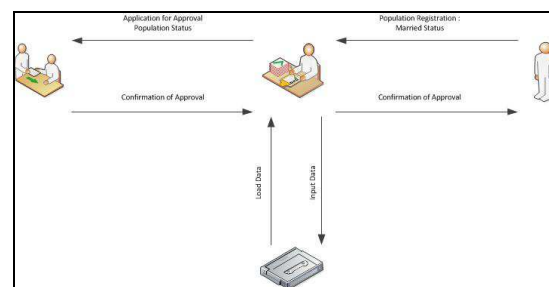


Figure 10: Member Sign Up

Most of the activities in this information system are done in the administrator page. Some features that could be controlled in the administration page of this information system are mentioned as follows:

- In-*banjar* marital case
- Out-*banjar* marital case
- Intra-*banjar* marital case
- Inter-*banjar* divorce case
- Intra-*banjar* divorce case
- Family tree case

- g. Mortality case
- h. Natality case
- i. Non-indigenous resident case
- j. Temporary resident case
- k. Facility of ST organizational management
- l. Facility of PKK organizational management
- m. News management facility and data master
- n. Data archive
- o. Facility of *Banjar* leader
- p. *Banjar* activities record.
- q. Report

This information system focuses more on the population census management. The other part of this application is ST organizational management PKK organization, and information broadcasting to *banjar* members.

3.2 Family Tree Application

Family tree can be figured in many ways such as branches – so it will look like a tree. Giving numbers on chapter and sub-chapter is the other way that can be done to describe family tree. Chapter and sub-chapter numbering is used to make application of this system easier. One to another data will be related.[9] See the following example for the illustration of case in Figure 5.

1. LEBAH'S BIG FAMILY
 - 1.1 MR. LEBAH
 - 1.1.1 MRS. RAI
 - 1.1.1.1 MR. TAMAN
 - 1.1.1.1.i MRS. ARI
 - 1.1.1.1.1 ARIS
 - 1.1.2 MR. SUJANA
 - 1.1.2.i MRS. SWITRI
 - 1.1.2.1 MR. BAGUS
 - 1.1.3 MR. ADNYANA
 - 1.1.3.i MRS. RASMILI
 - 1.1.3.1 RATIH
 - 1.1.3.2 ARYA
 - 1.1.3.3 SASTRA
 - 1.1.4 MR. WIADNYANA
 - 1.1.4.i MRS. JERO
 - 1.1.4.1 AYU
 - 1.1.4.2 RUPEM

According to Figure 5, chapter and sub-chapter numbering is used in describing a family tree. Each small family then put into some categorization. These small families later will create bigger family in the same house.

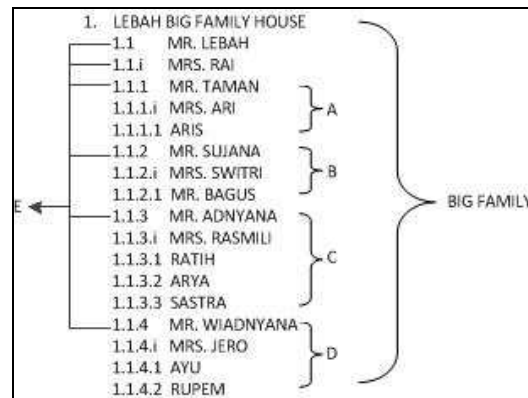


Figure 11: A Family Tree using Numbering System

Figure Description:

- A. Mr. Taman's family consists of his wife (Mrs. Ari) and his only child (Aris).
- B. Mr. Sujana's family consists of his wife (Mrs. Switri) and his only child (Bagus).
- C. Mr. Adnyana's family consists of his wife (Mrs. Rasmili) and his three children (Ratih, Arya, dan Sastra).
- D. Mr. Wiadnyana's family consists of his wife (Mrs. Jero) and his two children (Ayu dan Rupem).
- E. Mr. Lebah's family consists of his wife (Mrs. Rai) and his four children (Mr. Taman, Mr. Sujana, Mr. Adnyana, dan Mr. Wiadnyana).

A house might consist of one or more head of the household. There will come a time when the inactive old head of household is replaced by the next generation. For example, Mr. Lebah and Mrs. Rai are getting old and not very active anymore. Later on, Mr. Lebah and Mrs. Rai status of head of household is taken by Mr. Taman. In short, Mr. Lebah and Mrs. Rai will be Mr. Taman – who is the oldest son in the family – responsibility.

3.3 Marriage and Divorce Status

Marriage in the system falls into three categories[10]:

- a. In-*banjar* marriage
This type of marriage involves outside-*banjar* resident that get into the *banjar* itself. Thus, the number of *banjar* resident will rise: the outside-*banjar* resident gets married with one of the *adat* resident in that *banjar*.
- b. Intra-*banjar* marriage
In this marriage, there will be no inhabitant get into the *banjar* since the marriage is done between *banjar*'s indigenous people. There will be nothing added to *banjar* total population.

But, there will be changing status of both the groom and the bride from single to married.

c. Out-*banjar* marriage

Out-*banjar* marriage is the opposite of in-*banjar* marriage. There will be number of inhabitants added to *banjar* in-*banjar* marriage. In contrary, in out-*banjar* marriage, the total population will decrease. The married resident data will be saved as an archive since s/he does not belong to the *banjar* anymore.

Divorce cases in e-*Banjar* Bali system also has its own regulation implemented based on the local custom. When a couple decided to divorce and went back to their old home, both of them will not be considered as the ones who possess relationships towards their family anymore. Thus, there must be someone who accepts him/her. They could be his/her uncle, aunt, father, or anyone under the same lineage.[11]

3.4 Banjar Organizer

Banjar organizers such as *kelihan banjar* or *banjar* secretary hold the authorities to control and solve every problem exist related to *banjar* local custom.[12]

For instance, *magebagan* – an event where every male is ought to do night watch in relation to death ceremony – should be arranged by *banjar* organizers. This event usually takes place for three days or more, depends on the decision made by the family whose member is dead. Therefore, in this system, there will be turns for every head of household to come and do the night watch for the first night, the second night, and so forth.

The turns made is sent to every head of household. As a result, they will receive their night watch schedule notification on their member page.

3.5 Dinas and Temporary Resident

Dinas resident are the one who do not have the responsibility to get involved in the local custom affairs. They are usually originated from other regions, whether in the same island or outside the island, own a house and live in the *banjar*.[8] They only take responsibility in the *dinas* affairs. This is totally different from the indigenous residents who possess two resident statuses, *adat* and *dinas*.

Moreover, temporary residents are people who live temporarily in a place i.e. *banjar*. They might be originated from the island or outside the island. The examples of temporary inhabitants are lodging house occupant, tourists who spend their vacation for certain period of time, and other temporary living inhabitants.[8]

These two types of resident should be statistically recorded by the *banjar* so that there will be dangerous condition took place (e.g. case of illegal inhabitants who tend to commit crimes).

4. IMPLEMENTATION

The research stages were done by taking some examples of census population such as population statistic and the application of family tree method. This system was created using some software (e.g. PHP, Javascript, and MySQL).

4.1 Results of the Experiment

e-*Banjar* Bali homepage give people information about whats new in his area. All new information are here online.

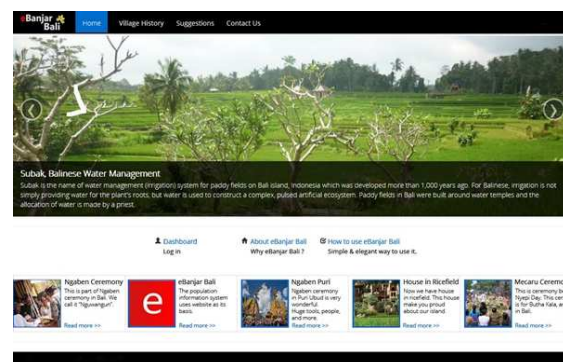


Figure 12: e-Banjar Bali Homepage

Sample of used data was taken from population data in 2013 – where the total population of *banjar* Padang Tegal Tengah Ubud was 429 people. The population statistic is shown in a form of column chart.

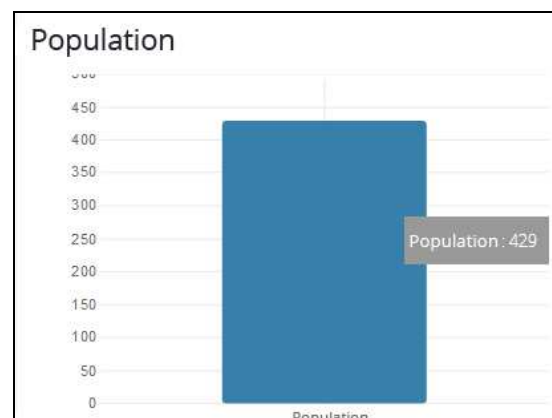


Figure 13: Total Population Graph

The graph shows the total population i.e. 429 people. The next experiment was done to see the population statistic by sex.

Based on the data, there are 218 males and 211 females.

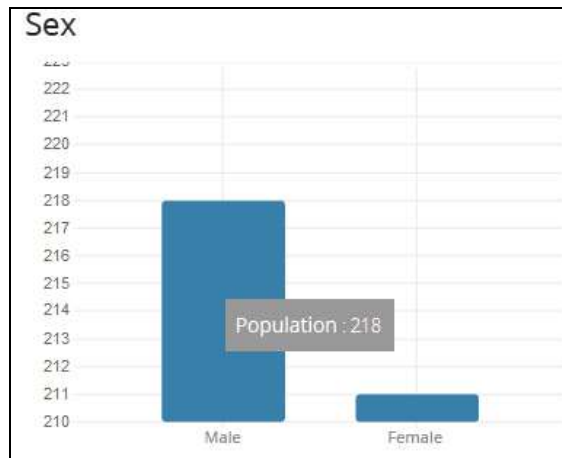


Figure 14: Total Population Graph by Sex

The next experiment was done to see the population statistic based on marital status: (1) married, (2) unmarried, (3) widower, or (4) widow.

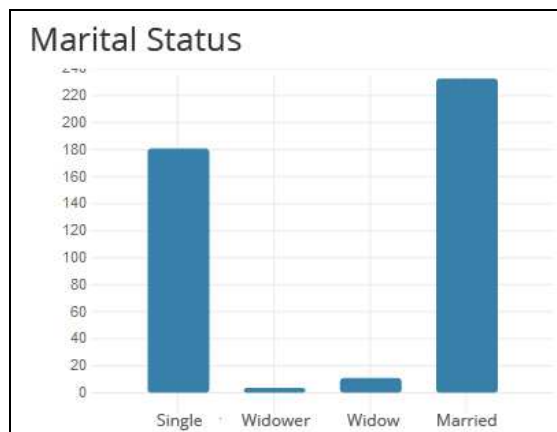


Figure 15: Total Population Graph by Sex

According to the graph, there are 181 unmarried persons, 4 widowers, 11 widows, and 233 married persons.

Resident list was provided in a form of table that contains common information. When a datum is chosen, there will be detailed information shown.

Data of Patriarch
Use to edit patriarch and view family members

No	NIK	Name	Age	Patrilineal / Matrilineal	Action
1	22.0504.060566.0002	A A GD ANOM SUKAWATI	48 years old	Patrilineal	View
2	22.0504.171281.0001	A A GD MAHENDRA P	32 years old	Patrilineal	View
3	22.0504.230668.0002	A A GD OKA UTARASEJA	46 years old	Patrilineal	View
4	22.0504.011254.0002	A A GD OKA WIANTARA	59 years old	Patrilineal	View
5	22.0504.311230.0001	A A GD RAKA PUJA	78 years old	Patrilineal	View

1 2 3 4 5 6 7 8 9 10

Figure 16: List of Population

A datum was taken from A.A. GD. Raka Puja to see the members of his family.

A A GD RAKA PUJA / Family Members

Add Family Members

No	NIK	Name	Kinship	Age	Action
1	22.0504.450737.0002	JRO ARSA	WIFE	77 years old	Delete
2	22.0504.190564.0002	A A GD RAI SUARSANA	SON	50 years old	Delete
3	22.0504.711215.0015	A A RAKA RUPET	MOTHER	89 years old	Delete
4	22.0504.700768.0002	A A ISTRI RK PURIAWIATI	DAUGHTER-IN-LAW	46 years old	Delete
5	22.0504.311297.0003	A A GD PRABAWA	GRANDSON	16 years old	Delete

Figure 17: An Example of Family Members

This is one example of family tree in this system. This is family tree of Gst Md Indrawaja.

Personal Identity Small Family Big Family

DETAIL OF BIG FAMILY

Index	Name
1	GST MD INDRAWAJA
1.i	GST MD RAI KARTINI
1.1	GST NGR OKA HARYAGUNG
1.2	GST NGR GD UPADHANA
1.2.i	GST AYU JUWITA

Figure 18: Family Tree in e-Banjar Bali

This is one example of marriage, marriage to the Banjar (In-Banjar). This is the input form of In-Marriage process. Only in admin page.

In-Banjar Marriage

This type of marriage involves outside-banjar resident that get into the banjar itself

Husband [+](#)

Lineage

Wife [+](#)

[Save new data](#)

Figure 19: In-Banjar Marriage Input Form

Member of ST and PKK can be showed year by year.



Figure 20: An Example of Family Members

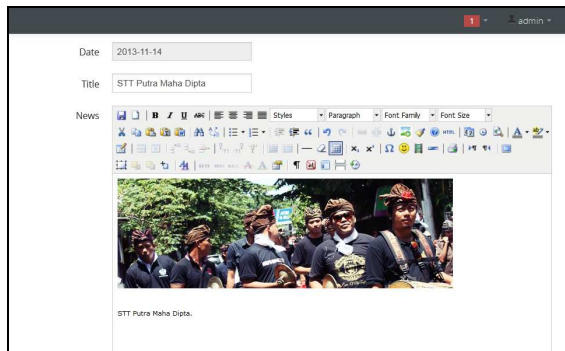


Figure 21: Write a News in Admin Area

Table 1: Comparison Population Census (E-Banjar Bali, Book, And Ms. Excel.)

Features	*	1	2
The dissemination of information is much faster	√	-	-
Anytime and anywhere could be accessed by <i>banjar's</i> administrator, the committee of the <i>banjar</i> and the whole <i>banjar's</i> population	√	-	-
Online	√	-	-
The work efficiency of data census	√	-	√
Information among people each other in order to be more knowing the fellow members of the <i>banjar</i>	√	-	-
A faster report	√	-	√
Critical idea and suggestion from people to <i>banjar</i>	√	-	-
Notification of news or messages for people (residents) online	√	-	-
Easy to use	√	√	-

Note:

* : Population census with e-Banjar Bali

1 : Population census with book

2 : Population census with Ms. Excel

5. CONCLUSION

In this paper, the way to count the *banjar* resident in Bali was explained. Some experiments have been conducted in this system. Conclusions of this research can be formulated as follows:

- Population census management in a region can be done easily. For instance, a resume of the whole population census can be seen from the population graph.
- Population data is organized based on patriarch system. Head of household possesses family member which is then known as family tree.
- Manual population census, where books are usually involved in, is now can be changed into computerized one and online. Thus, population census works can be finished efficiently.
- Technology implementation towards traditionality cannot be denied. The combination of traditionality and technology will trigger innovative invention. An example can be taken from the transition of manual population census into the modern one.

4.2 Discussion

The objective of this information system is to help the society in the rural area, especially Balinese *banjar* residents, in the process of population census. This system is based on PHP, Javascript, and MySQL so that it can be implemented online and every resident has the opportunity to access it anywhere and anytime.

Every resident will get their own username and password that can be used to access system or log in. Connected to the member page, the residents will be able to see the information about themselves as well as their family, population statistic, other resident information, and organizational information exists.

The system will manifest as an easier way for the society in getting to know each other. Also, it will help the village organizers in getting reports from the society. To be expected on the future, citizens know each other more, care about the information, as well as the discipline of the population census. The comparison of data collection methods with the book, Ms. Excel, with e-Banjar Bali is as follows;

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