

FORMATION PROCESS OF ROADS NETWORK IN KINSHASA DURING 100 YEARS

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1. INTRODUCTION

The capital of Democratic Republic of the Congo (D.R.C), Kinshasa that is a metropolitan area with a total population in excess of 12 million people. This city is one of the biggest in Africa. Recent surveys estimates, for the whole of the Kinshasa agglomeration, about 750,000 the number of trips in the morning peak in public transport and 250,000 the number of trips done by private car over the same period. The mobility rate would be of the order of 1.6 displacement / inhabitant / day, placing the city in the lower average of African cities. However, the peculiarity here is the importance of walking, which would provide about 80% of the trips¹. So, despite the impression given by the traffic jams observed in Kinshasa, people do not move much, or go on foot ("line 11")⁽¹⁾. A reason why the heavy traffic congestion is the city planning problems including transportation system, to process of road network during 100 years to point out structure problems.

2. HISTORY OF KINSHASA ROAD NETWORK

The explorer Henry Morton Stanley said, "Without railroads, the Congo is not worth a penny", in 1885. Kinshasa has not been able to construct adequate road and rail network due to rapid increasing traffic up to now. In fact, with 9,965 km², the most populous city, located in the western of the country, limited by an important length of Congo River, Kinshasa has 24 municipalities. This city lacks a provision of an adequate infrastructure. For better idea of roads evolution and their condition, the history of Kinshasa road pattern for land use, from colonial times to the present day, is detailed hereinafter:

2.1. From 1900 to 1930

These municipalities, Gombe, Limete, Barumbu, Kinshasa, Lingwala, Kintambo and Ngaliema (01) that were created before Independence are the best off because they benefited from a planned urbanism. Gombe was created around 20th century, according to Western urban standards, to accommodate the infrastructure of Kinshasa. Its roads are still maintained today in good condition. The sector of the Boulevard of June 30th, main artery of the area, others roads are well connected to the rest of the city; As western center of the city, Gombe is well connected to the rest of the city by the main arteries that converge there. This zone has a grid pattern as road network and some diagonal sub-patterns as shown below (Fig.01 is the scheme realized in 1919 and belongs to northeast of Fig. 02).

Since 1929, Kinshasa has had a railway line of about 336 Km connecting it to Matadi (Kongo-Central Capital) allowing bypassing the river's waterfalls and connecting the navigable part of the river (Upstream) and the main seaport. Therefore, the railway considered as an important element in total transportation system in Kinshasa master plan².

2.2. From 1930 to 1960

In this period, there was an important extension of the city with seven municipalities namely Kasa-vubu, Ngiri-Ngiri, Kalamu, Ndjili, Matete, Bandalungu and Lemba. Therefore, Kasa-Vubu and Ngiri-Ngiri are called, in local language, "mboka ya sika" which means "new cities", as opposed to the old cities described above. They were built after the Second World War, from 1945 to 1950. The subdivision of N'Djili, on the right bank of the river of the same name, results from the application of the urban plan of 1950 which provided for the displacement of the N'Dolo airport in N'Djili, the implantation of an industrial zone in Limete and the enlargement of Lumumba Boulevard. Figure 02 gives more details.

2.3. From 1960 to 1975

After independence, the population of the city has exploded from 400,000 in 1960 to 800,000 in 1966, the administration lost control over the subdivisions that had managed to maintain the colonial administration. It was a wild urbanization, but this term is erroneous, at least for the extensions, which made in the Plain. The land extension happened in the low and up sites. The new municipalities are Bumbu, Makala, Ngaba, Selembao, Kimbanseke, Mongafula, Ngaliema (02), Kinsenso and Masina. The road patterns do not exist compared to other areas. Figure 02 details the pattern.

2.4. From 1975 up to present condition

In 1975, the political turning point of Zairianization⁽²⁾, also led to the construction of roads and extension of residential land such Nsele and Maluku, the largest trunk road of Kinshasa Boulevard Lumumba was enlarged. After that, ending of major work in the city until 2007 that roads improvement work restart, short amelioration of traffic over the town. The singularity of each neighborhood probably accentuated by these difficulties of connection. Figure 02 relates information.

Keywords: Kinshasa, Road network, Transport, Urban Development, Conceptual plan.

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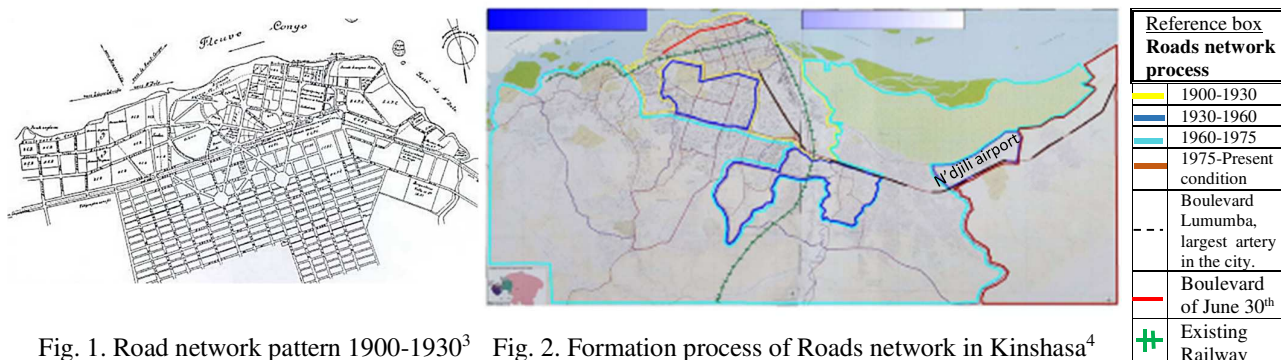


Fig. 1. Road network pattern 1900-1930³ Fig. 2. Formation process of Roads network in Kinshasa⁴

3. AN IDEA TO IMPROVE PRESENT ROAD NETWORK PLANNING

In Introduction, the author has already explained the present traffic condition is not good. The current physical condition of the city divided by three zones East, Center and West with two small rivers that separate each other zones. The connection of different lands made by almost one trunk road. Road network should be planned to cope with such city planning change. Regarding this situation, the provincial government made a comprehensive development plan to guide or develop different municipalities. According to land use plan of SOSAK (Schéma d'Orientation Stratégique de l'Agglomération Kinois, Strategic Scheme of Kinshasa Comprehensive Master Plan)⁴, the proposal road network that mixed old grid pattern and easy north-south longitudinal trunk road. That new traffic demand can be absorbed to new road network without going through center zone.

4. CONCLUSION

Initially the author recognizes a solution about the difficulties that Kinshasa has, some traffic problems that caused by insufficient, inappropriate road network and land use. There is unhappy process of the city expansion with very few total planning has historical background. In that case, the planning objectives are construction of an external ring road system and internal connection (Figure 04). Finally, the key point is to separate the capital city by three areas and constructing three large ring roads to connect all land. In west area N°1, the main land use is administrative and commercial, land use of center N°2 main area is residential and eastern N°3 area is new developing zone, which is not far away from the main airport. The ring roads can let congested traffic volume by generated zone and OD traffic amount to make a detour to avoid each center business district. At next step, the author tries to analyze traffic volume and to prove efficiency of ring roads.



Fig. 3. Ring road alignments as conceptual plan.

Note:

- (1) Line 11: Walking for long distance for people living around transportation area of bus platform 11 due to crowded zone.
- (2) Zairianization: was an official state ideology of the former President Mobutu regime. The policy, as implemented, included numerous changes to the state and to private life, including the renaming of the Congo to Zaire and its cities.

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