

Comparison of fixed and mobile WiMAX

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Summer 2012

Plan

Introduction

Senegal

- ✓ The senegalese teranga
- ✓ Senegalese cuisine
- ✓ Some special events
- ✓ Some places to visit

Gabon

- ✓ History
- ✓ Politics
- ✓ Geography
- ✓ Fauna and Flora
- ✓ Culture

Our Work

- ✓ Nework topology
- ✓ Analysis

Conclusion

Introduction

Why do we choose this work placement?

- ✓ Canada's reputation
- ✓ To improve our english
- ✓ Previous experience of ISITV's students
- ✓ To become familiar with OPNET

Welcome to Senegal the teranga's country



Senegalese cuisine and food

1. special meal:
 - ✓ The national dish: Ceebu jën
 - ✓ Bassi salté



« cere »



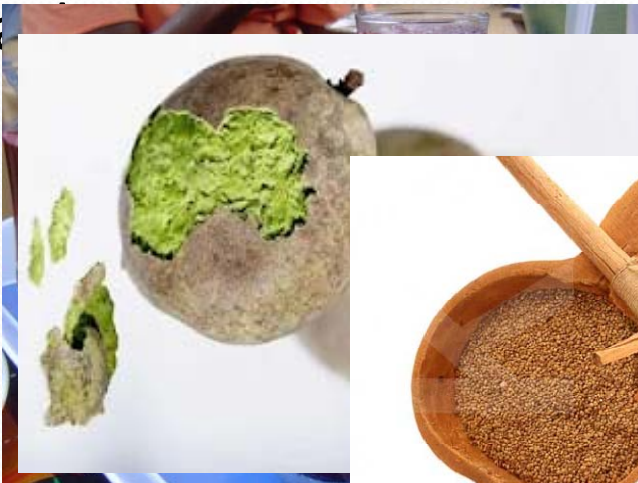
Senegalese cuisine and food

2. Special juice and dessert

✓ Bissap juice

✓ Other juice

✓ thia



Detarium s



Monkey bread fruit

Hibiscus sabdariffa

Music and instruments



sabar



Ngel serere



Djembe mandingue



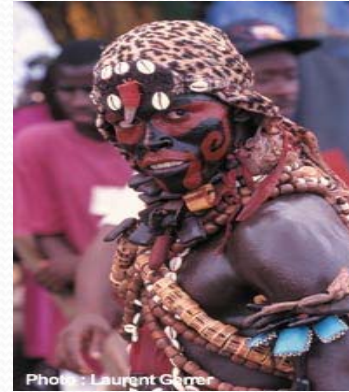
Diolas ,socé



riti

Specials events

1. Le simb



2. Rite des bassari

It mark the transition to adult stage.



Specials events

3. Kankourang

practice by the mandingue, it is ritual that marks the passage from childhood to adulthood



4. St Louis's lantern



Some places to visit

1. Gorée island

Population :1102 inhabitants

Area:0,182 km²



2. Pink lake: Retba



Some places to visit

5. National bird park

366 species of
bird are listed



6. Niokolo koba's park



Gabon

History

Location: Cost of central Africa

Portuguese word: Gabao

Independent of France: August 17th 1960



Gabon

History (rest)



Flag

Green: equatorial forest

Yellow: equatorial sun and mineral resources

Blue: ocean, waterways



Seal of Republic

Mother: Republic, State

Baby: gabonese people

Motto : « Union, Work, Justice »

Gabon

Politics



Léon MBA (1960 - 1967)



El Hadj Omar BONGO
ONDIMBA (1967 - 2009)



Ali BONGO ONDIMBA
(2009 – now)

Gabon

Geography

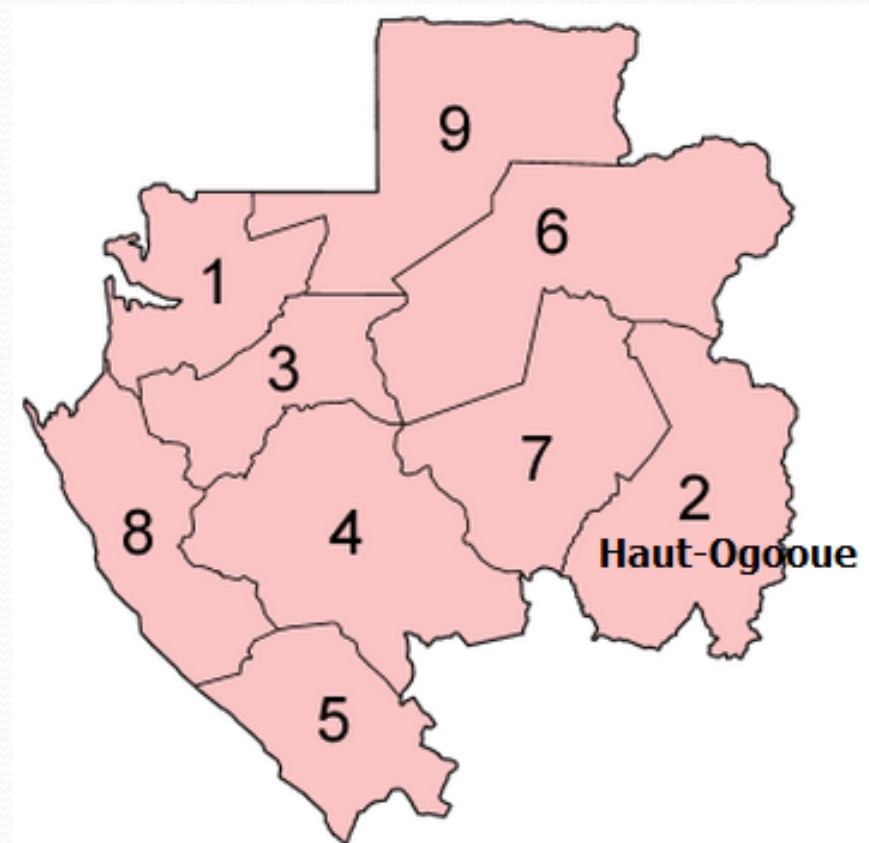
Superficie: 267 667 km²

Population: 1 534 300 habitants

Division : 9 provinces

Ethnic groups : about 50
Obamba
Fang
Punu
Téké
Nzébi
Myéné
.....

Currency: 1 € = 655,957 F CFA
\$1 CAD = 529.218 F CFA



Gabon

Fauna and flora



Chimpanzee



Gorilla



Mandrill



Viper of Gabon



Black and green mamba



Gabon

Fauna and flora (rest)



The grey of Gabon



Elephant



Porcupine



Pangolin



Bongo



Potamochere

Gabon

Fauna and flora (rest)

Okoumé

Ebony

Iboga

Rubber tree

Mangrove

Atangatier

Eggplants



Gabon

Culture

Local drinks



Instruments of music



Tam-Tam

18/07/2014



Zither

DIENG /OKOUMBA



Summer 2012



Mounongo

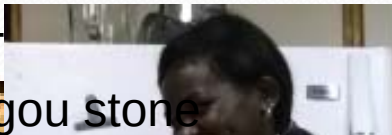


Gabon

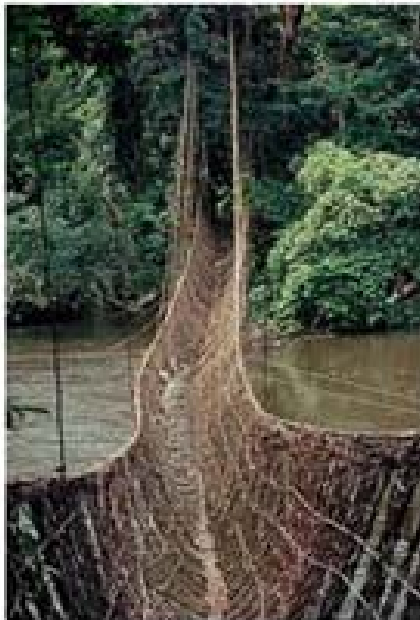
Culture (rest)

Local dress code

- Loinclothes



- Art
- Mbigou stone
 - Liana



Liana's bridge



Bush pannier



Chair

Comparison of fixed and mobile WiMAX

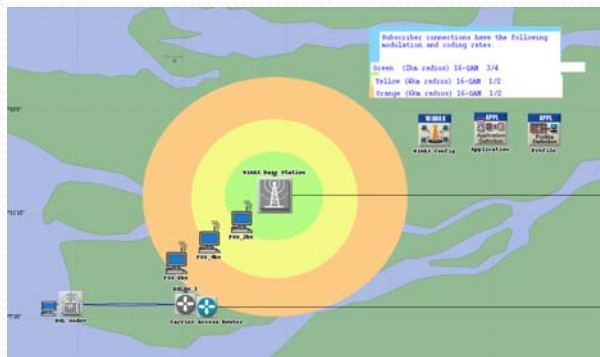
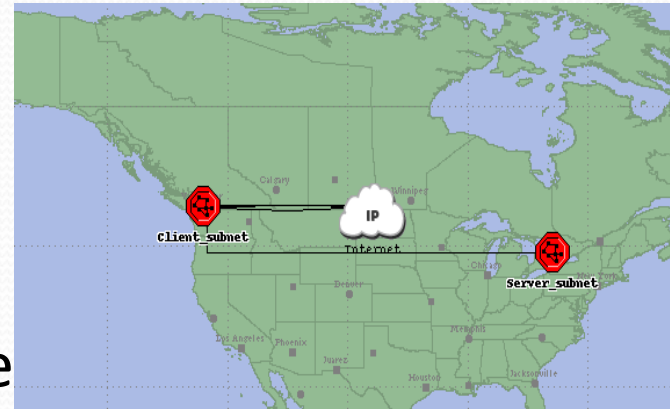
- ✓ This project enhanced a previous work
- ✓ WiMAX: Worldwide Interoperability for Microwave Access
- ✓ Compare performance
- ✓ OPNET Modeler version 16.0

Comparison of fixed and mobile WiMAX

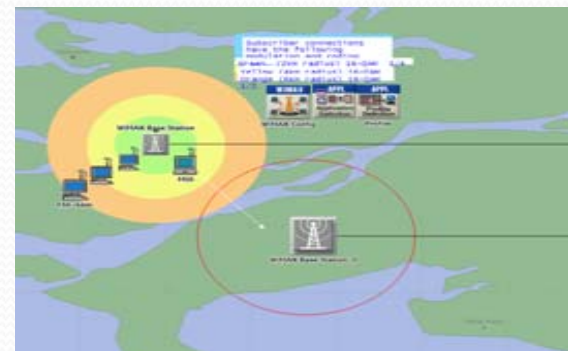
Network topology

- ✓ Server in Toronto
- ✓ Clients in Vancouver

Topology of the client subnet



Previous work

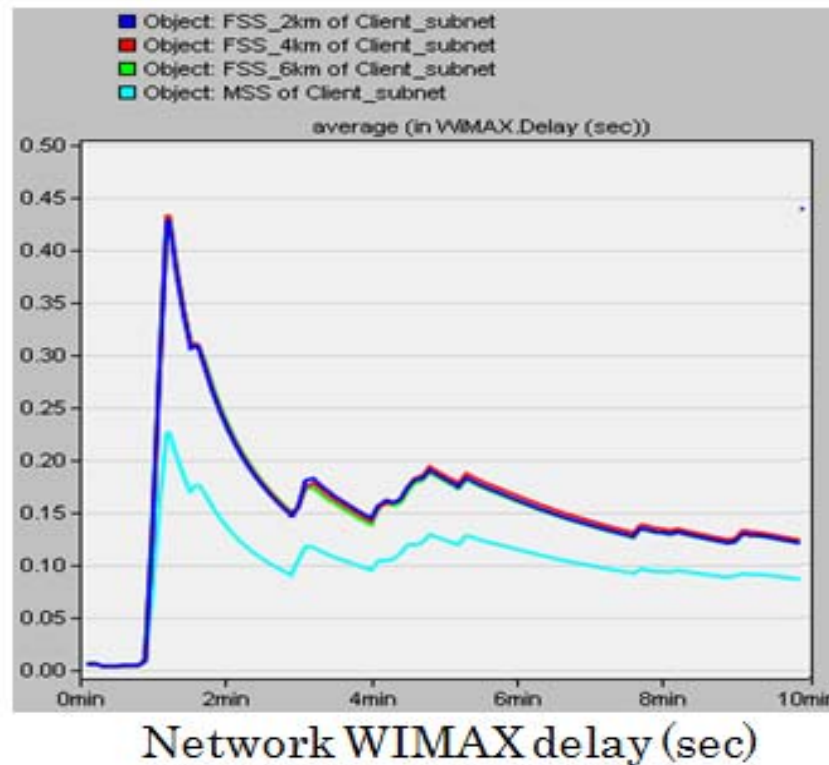


Our work

Project

Analysis

Delay : required time for connection establishment and the one that is taken for the information transmission

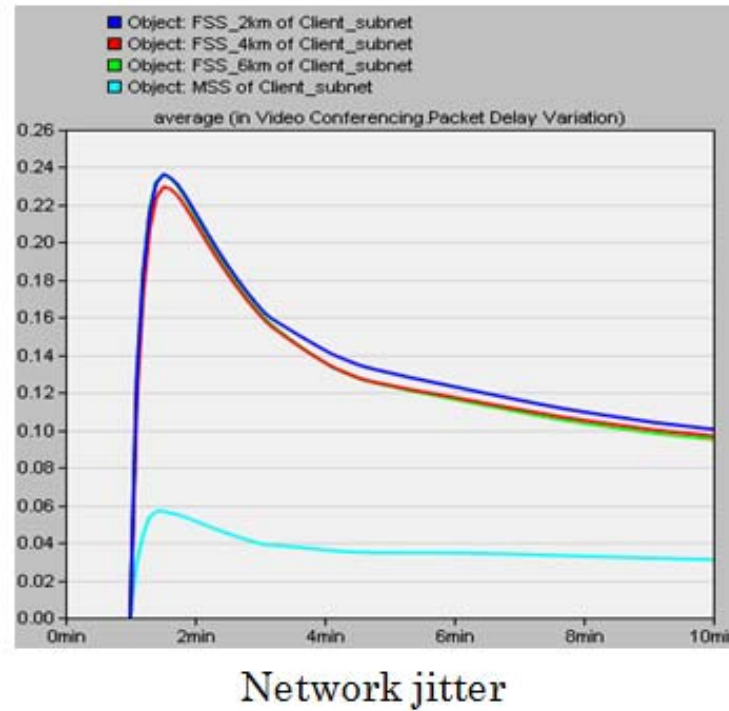


Mobile subscriber station(MSS) has a better delay than the fixed subscriber station (FSS).

Project

Analysis (rest)

Jitter: the variation of information transfer delay

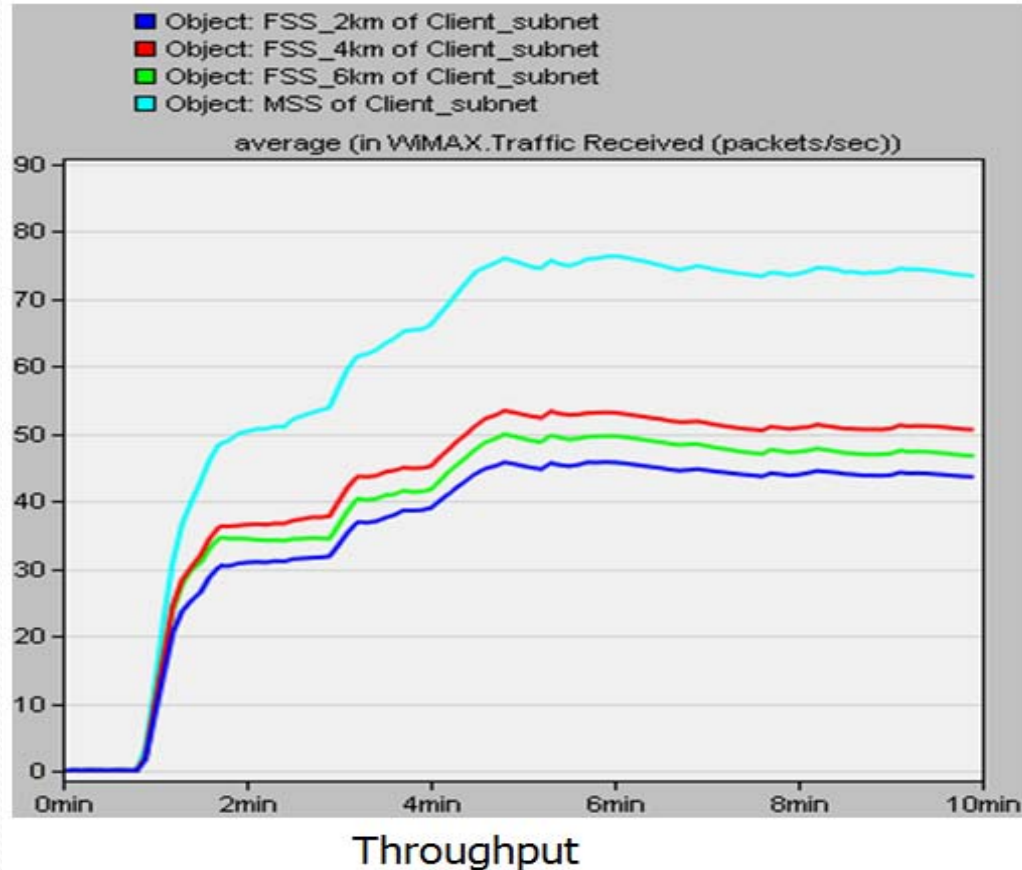


Better performance for the MSS jitter : the lowest curve

Project

Analysis (rest)

Throughput: the information quantity which may be transferred



Mobile throughput is higher than fixed throughputs

Project

Analysis

Video packet loss: ratio lost packets and the number of total received packet

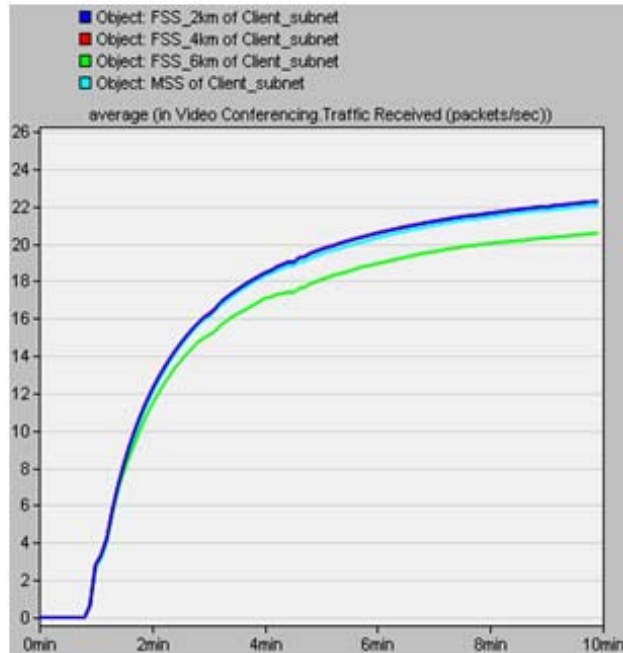


Figure: Network traffic received (packets/s)

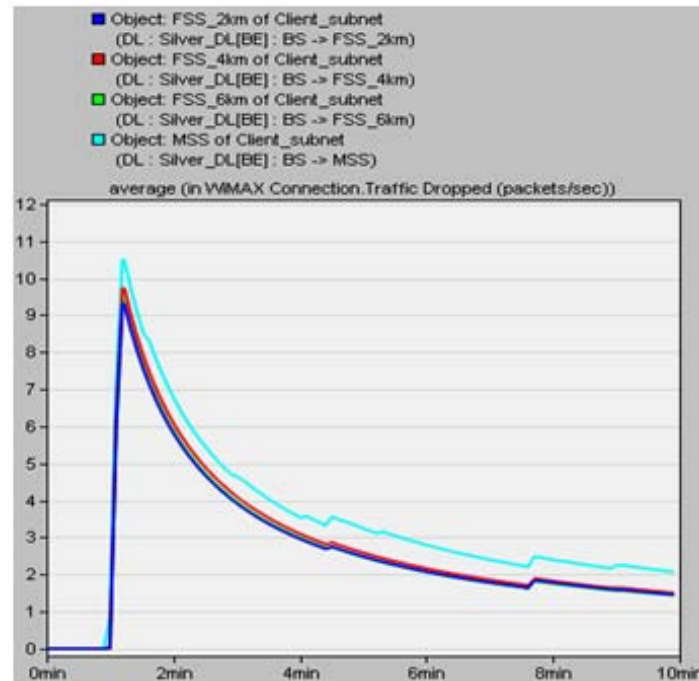


Figure: Network traffic dropped (packets/s)

Mobile Subscriber Station receives the same traffic as the closest Fixed Subscriber Station to the Base Station but loses the most

Conclusion of the project

- ✓ The Mobile Station has better performances than Fixed Station except packet loss performances.
- ✓ when distance between base station increases, the performance of the mobile station drops compared to the fixed station.
- ✓ We haven't succeed to make the handover

Conclusion

- ✓ Improvement of our english
- ✓ Useful knowledge of OPNET Modeler software
- ✓ progress on technical, relational field

acknowledgement

- ✓ Professor Ijiljana Trajkovic
- ✓ all the members of the Communications Network laboratory



The background of the slide features a dense pattern of small, light blue water droplets. At the top, there are stylized, wavy lines in shades of blue and green, suggesting a horizon or water surface.

Thanks
Dieureudieuf
Lévélé bé