

Living in wooden heritage: Reviving craftsmanship

2 Examples of traditional wooden
houses in French Guiana:
The Boni house and the Creole house

Christian MARTIN Architecte - France

STRATEGIES FOR ENHANCING HISTORIC CITIES' RESILIENCE TO DISASTERS

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KULDIGA, LATVIA



2 Examples of traditional wooden houses in French Guiana:

The Boni house and the Creole house.



Boni House
(Papaïchton)



Creole House
(Sinnamary)



The Boni (or Aluku) people

The Boni are slaves who escaped in the 18th century from the plantations of Dutch Guiana, and who took refuge on the French side of the Maroni River.

In the Amazon rainforest, in contact with the Amerindians, they developed a social organization and an original culture, because coming from different regions of Africa, they did not even have a common language.

The very complex culture invented by the Boni is a syncretism of Amerindian, European and African inspiration.

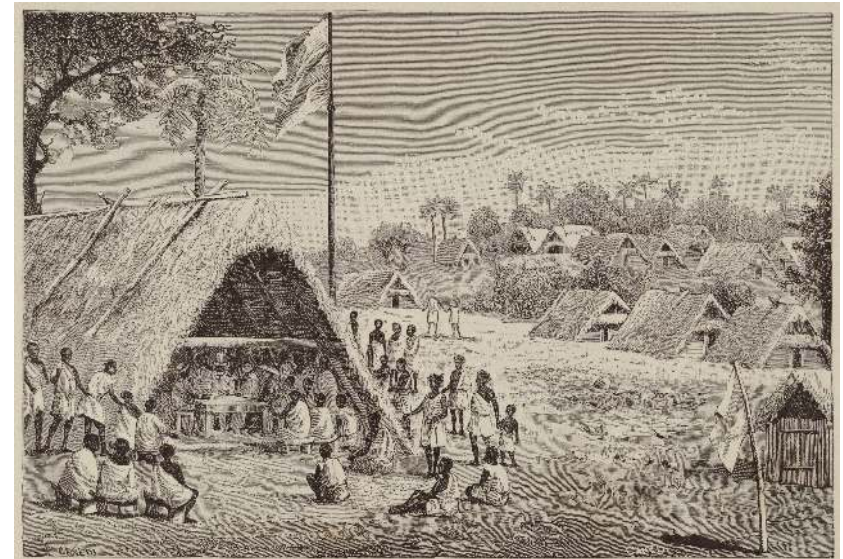
(Social organization, language, religion, art...)

Boni Villages

19th century engravings



Cottica. — Maison du Gran-Mon.



Notre réception à Pilot.

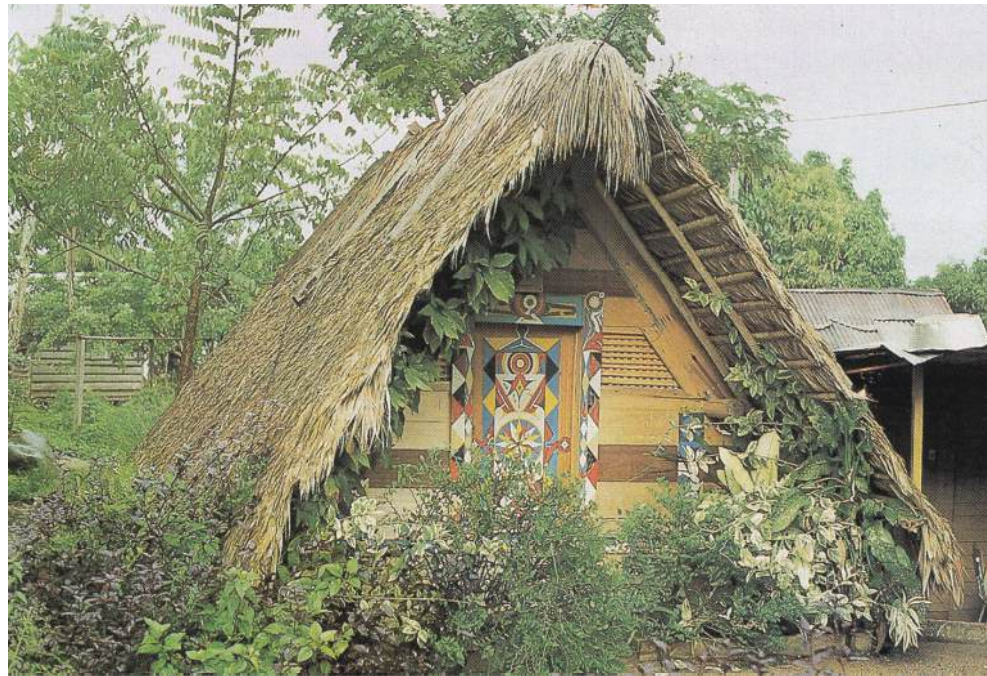
The Boni villages

Until the 1970s

The villages are located along the Maroni River and accessible by canoes.

The houses still had their green cover (now it's exceptional)

The different lineages occupy different neighborhoods, around community services concerning meetings and reception, cassava preparation, worship and the mortuary space.



Cover of Wai



Boni Houses Right now

No longer adapted to today's way of life, the traditional heritage of these houses is now in ruins.

The plant cover has been covered with metal sheet to avoid maintenance, the technique of which is lost.

The low height of the doors is a handicap.

Abandoned by the new generations, they were destroyed by humidity, and replaced by modern masonry houses, built on the outskirts of the heart of the village.

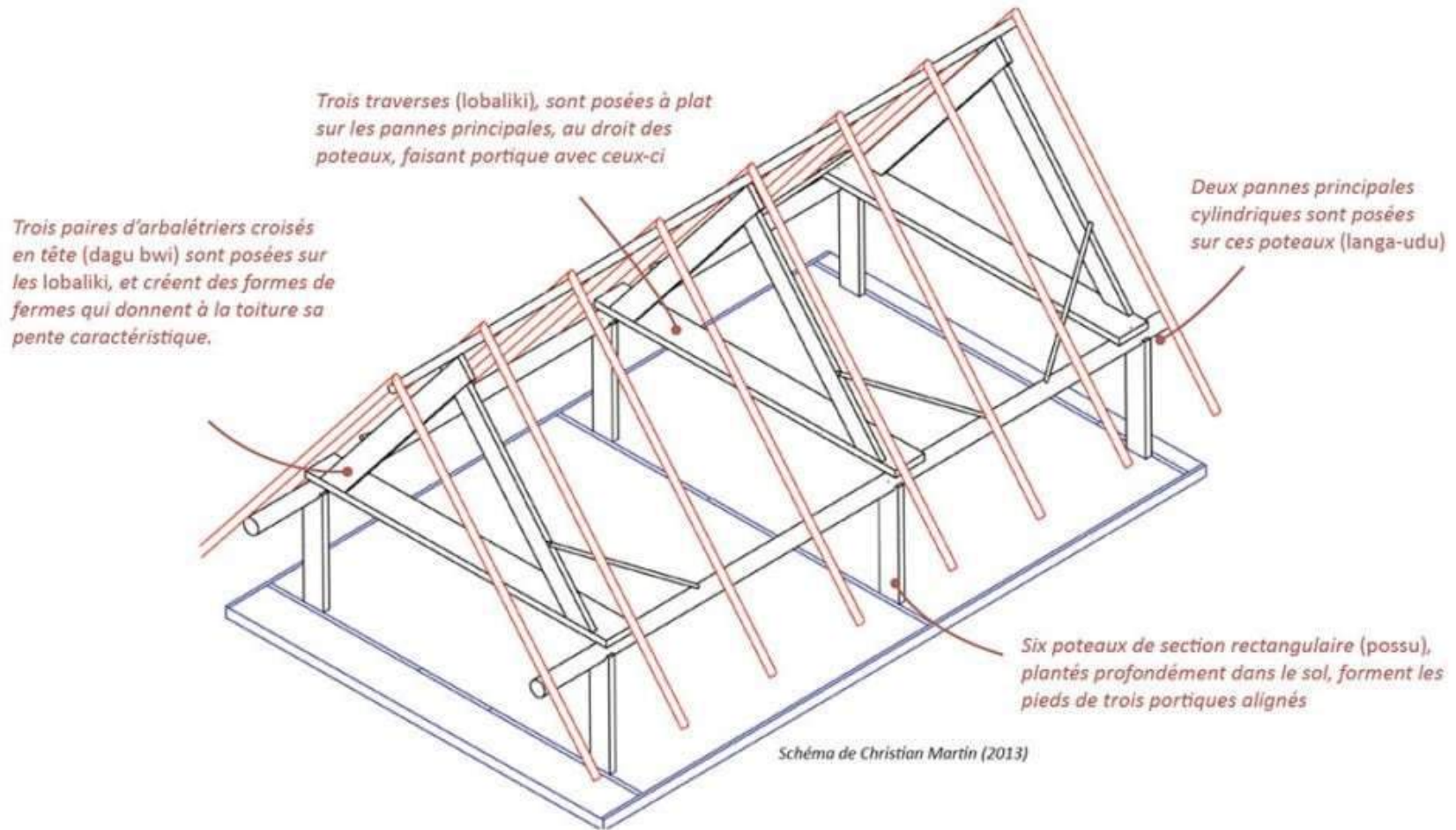


Abandoned houses



Historic centre of the village of Bonville

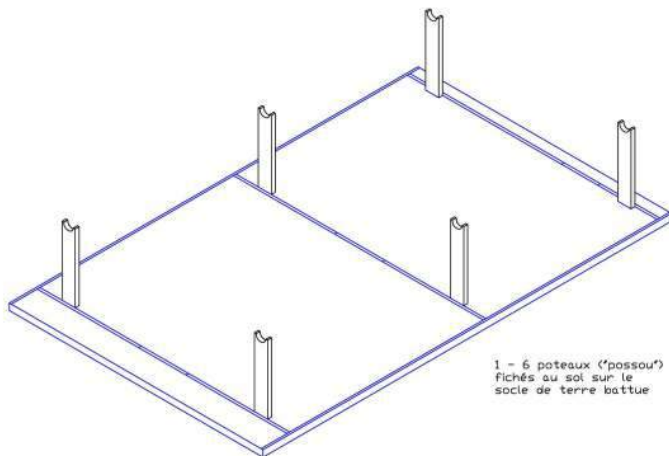
The construction method of the Boni house has its origins in the Amerindian house "Kalina" with European timber elements. But if the Amerindian house is open to nature, the Boni house is closed according to an African tradition.



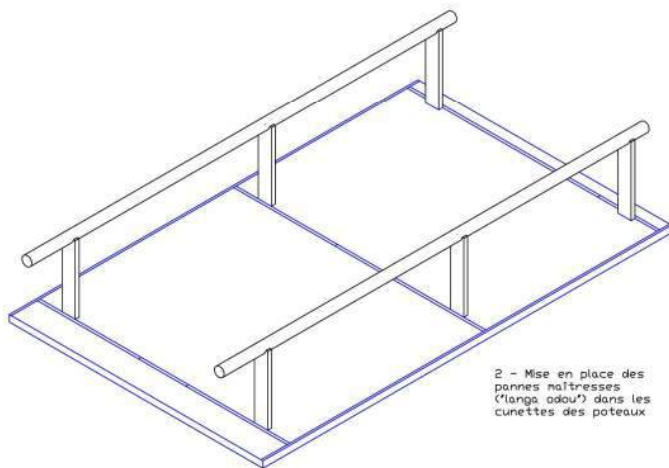
The structure of the Boni house



Native American House "Kalina"
19th century engraving



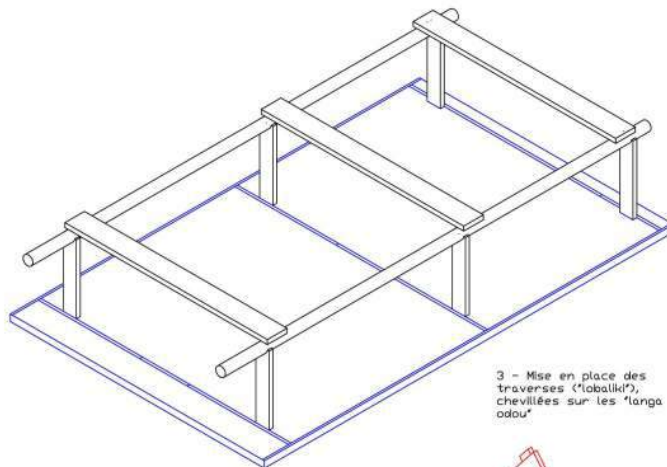
1 - 6 poteaux ('possou')
fichés au sol sur le
socle de terre battue



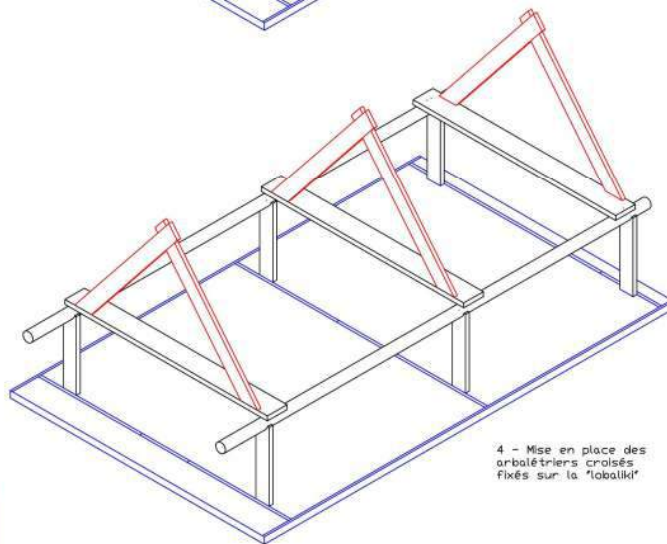
2 - Mise en place des
pannes maîtresses
('langa odou') dans les
cunettes des poteaux

Ch Martin 2013

Posts ("possu")
and master purlin ("langa udu")



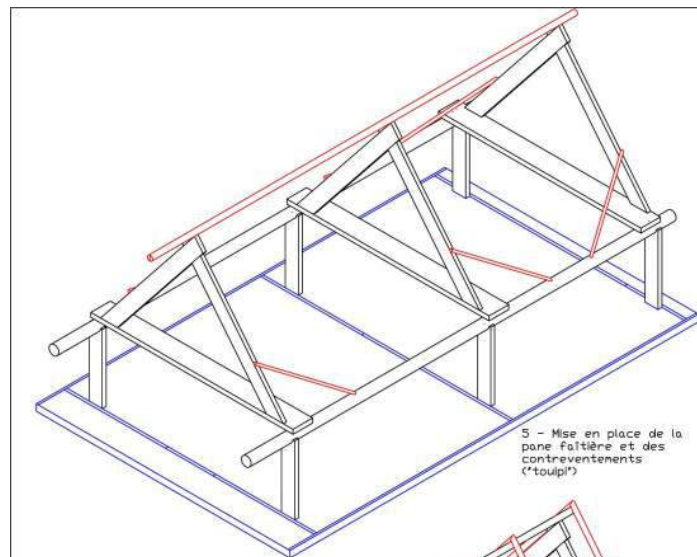
3 - Mise en place des
traverse ('lobaliki'),
chevillées sur les 'langa
odou'



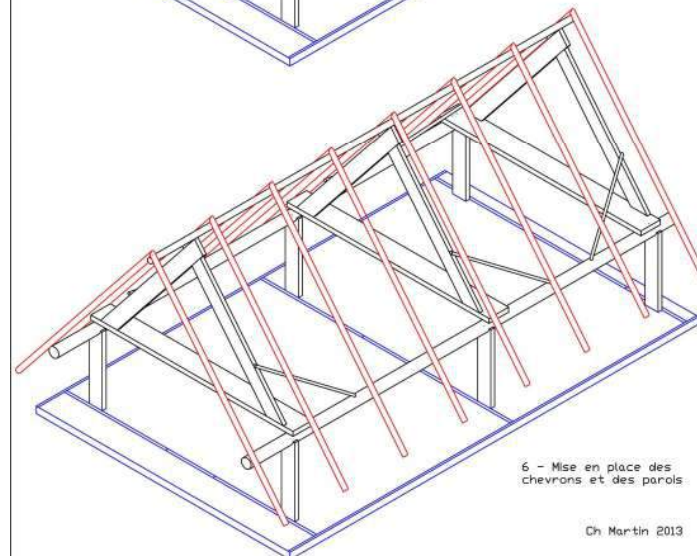
4 - Mise en place des
orbaletriers croisés
fixés sur la 'lobaliki'

Ch Martin 2013

Sleepers ("lobaliki")
and frame ("dagu bwi")



5 - Mise en place de la
poutre faîtière et des
contreventements
('touiipi')



6 - Mise en place des
chevrons et des parols

Ch Martin 2013

Ridge – purling
Bracing ("touiipi")
and rafters

Bedroom
(hammocks
hung
to the
structure)

Living room

Porch

(Cooking is
done
outside,
under an
open shelter)

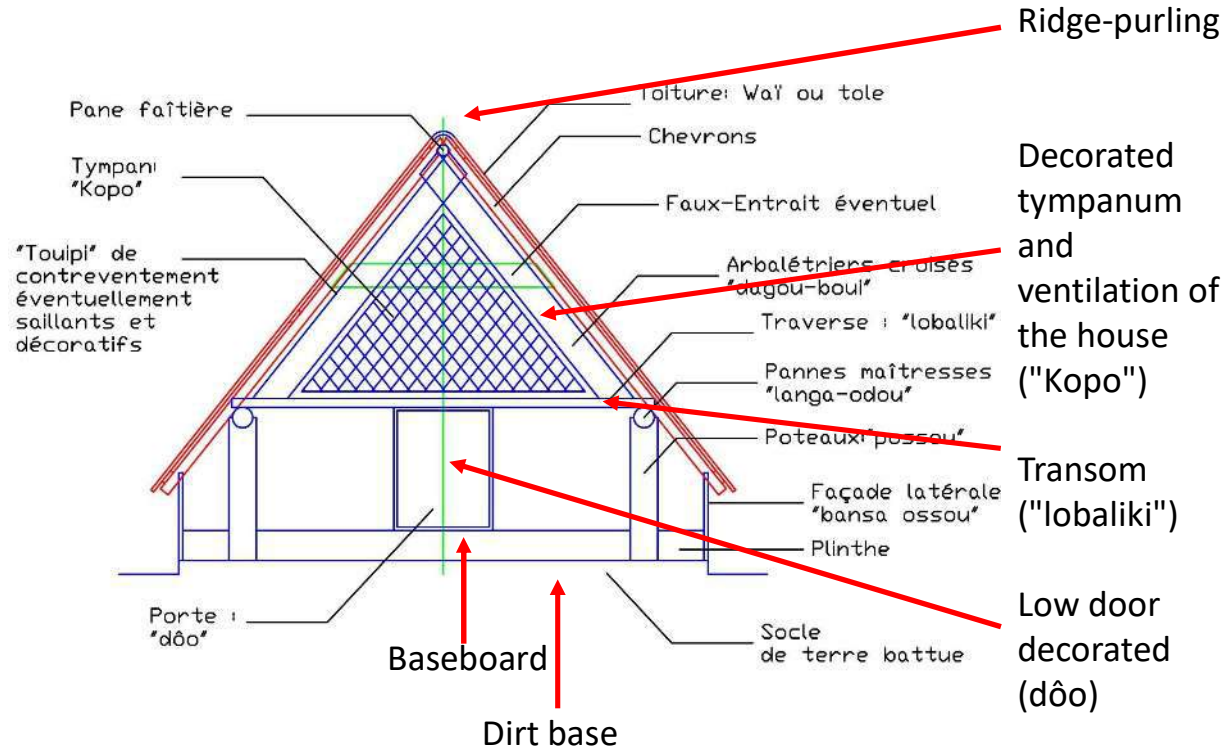
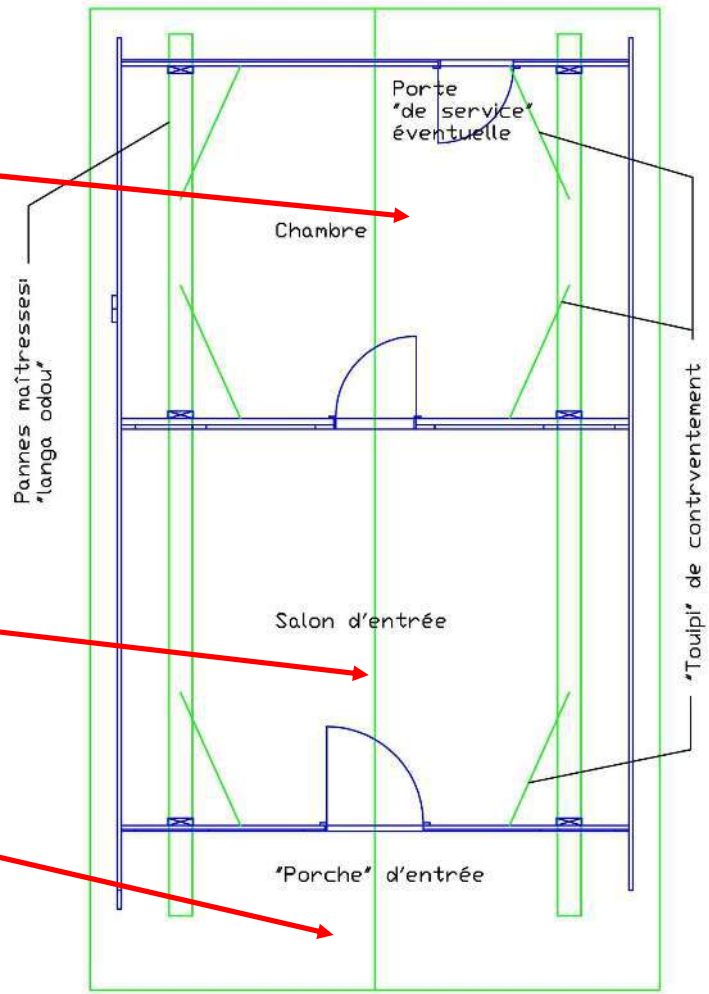


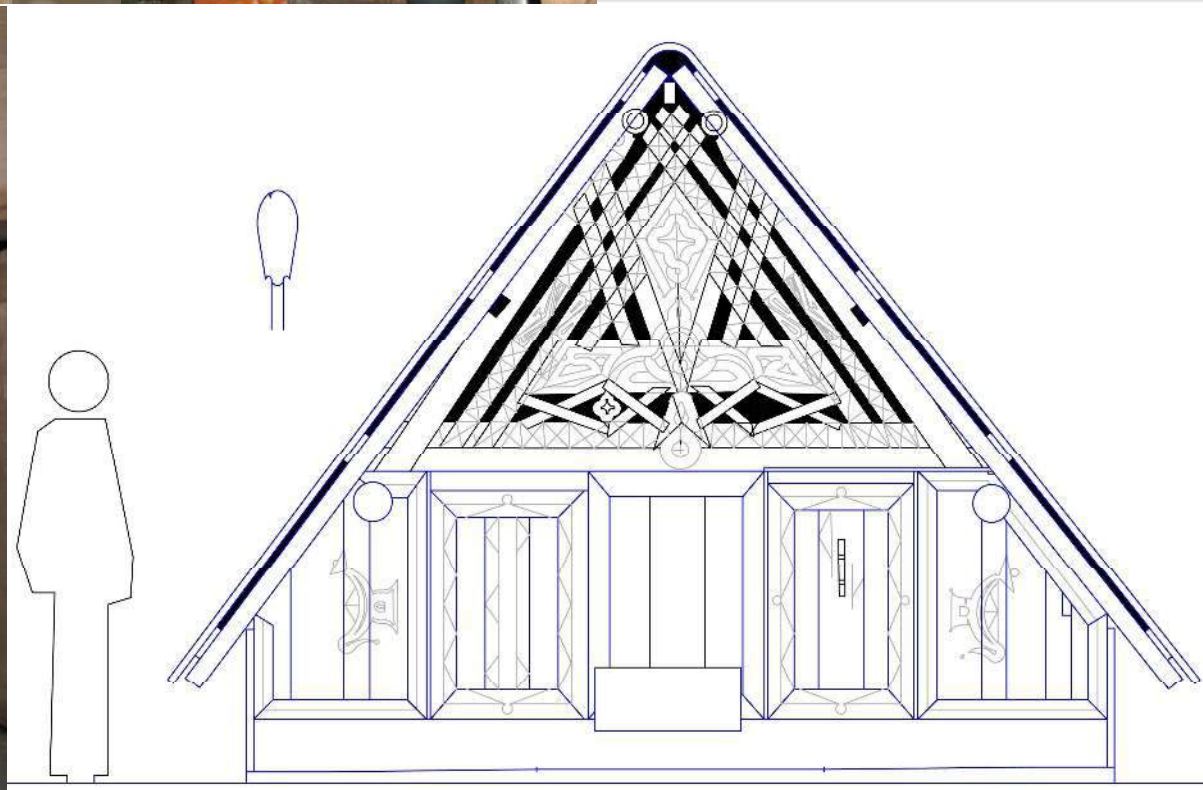
Diagram of the
Boni type house

Decorative elements

The decoration of the "Kopo" and the door is carried out by "Tembé", an art specific to the Boni culture. Intertwined patterns have symbolic meaning and express a concept.



Ma Kuli House in Loka



Ma Kuli House in Loka.

0 1 Relevé Ch. MARTIN Arch. 2013 3m Maison MA KULI - Loka

Home of Machine
Abaneli
in Boniville
Element of
"Tembé"
Preserved



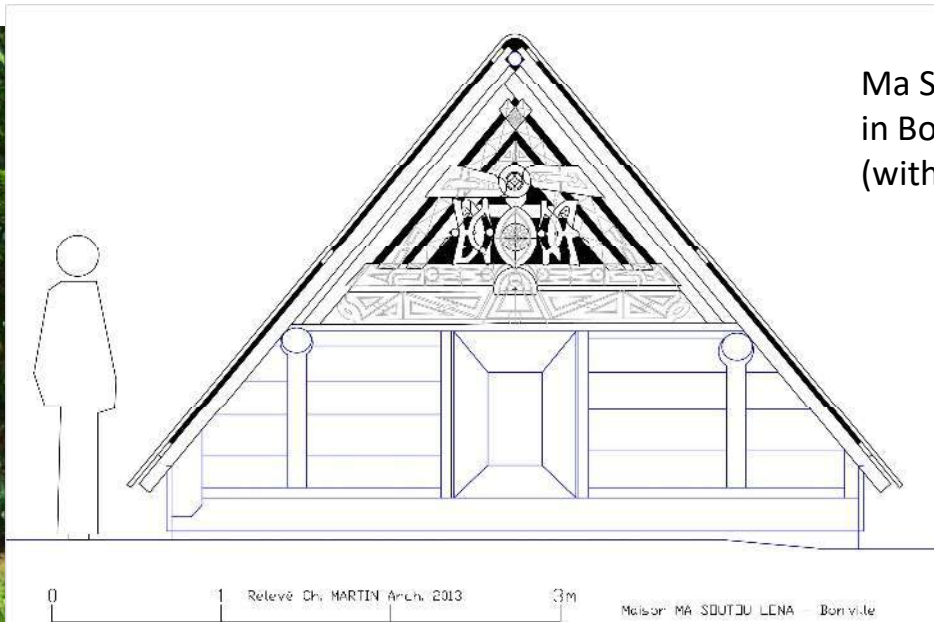
To stop bending down when passing through the door, the resident cut the crossbar (lobaliki), to raise the door. It has removed the plant "kopo" that provided ventilation, but has preserved an old element of "Tembé", a historical trace of the ancestors.



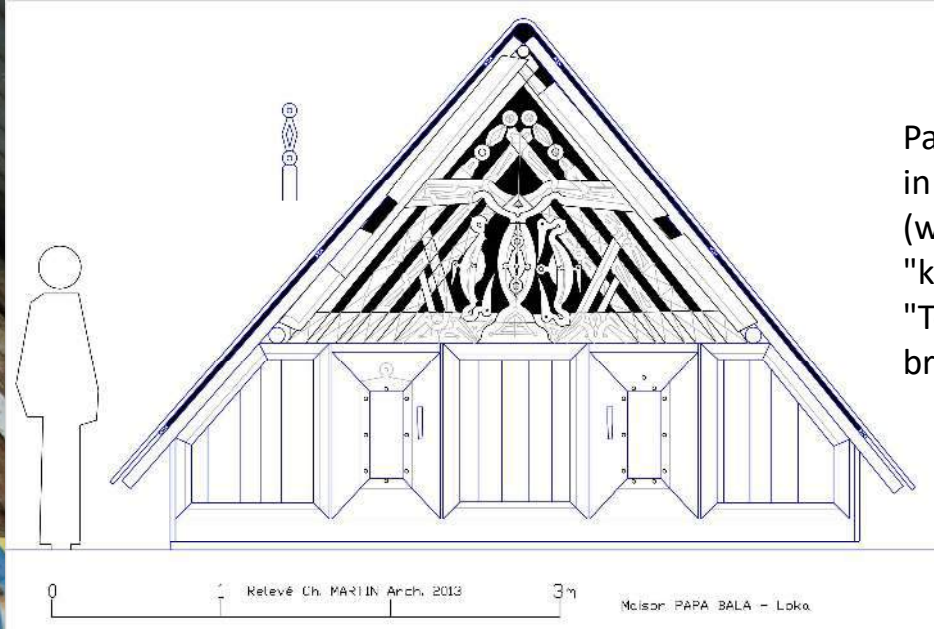
Before (with low door and vegetal ventilation "kopo")



After (with door raised and "kopo" removed)



Ma Soutou Léna House
in Boniville
(with "kopo" engraved)



Papa Bala House
in Loka
(with double doors
"kopo" painted and
"Touipi" of protruding
bracing)



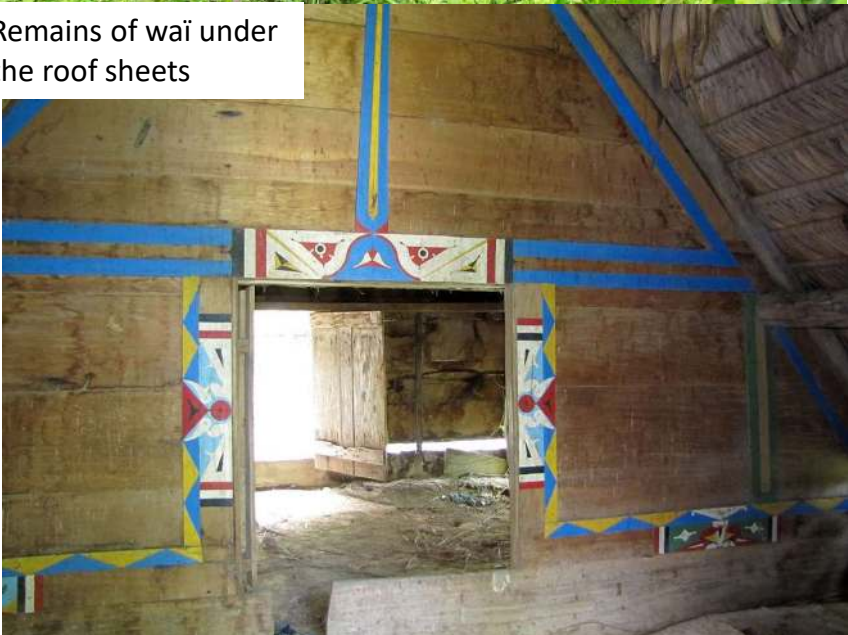
Loka Village Center

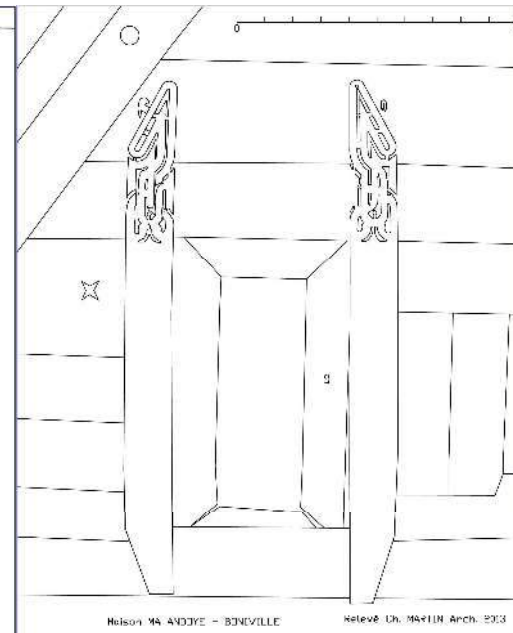
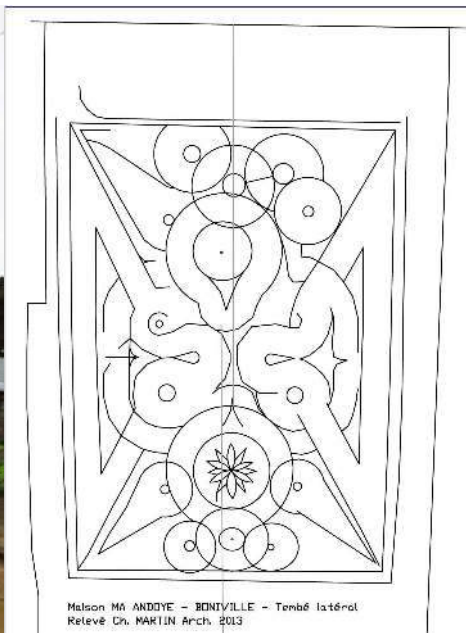


Abandoned house in Loka

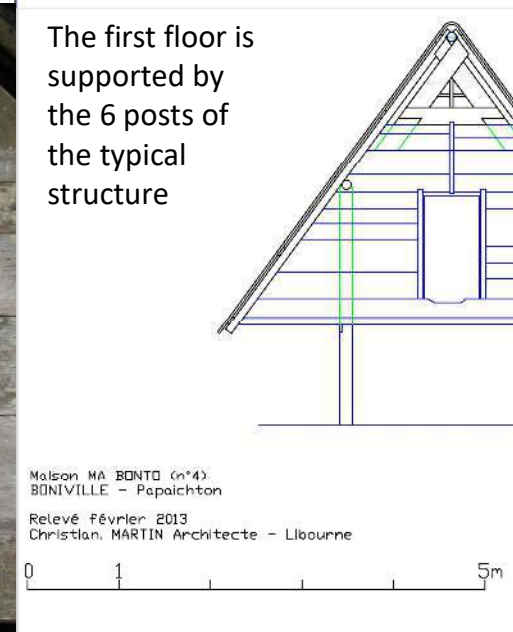


Remains of wai under the roof sheets



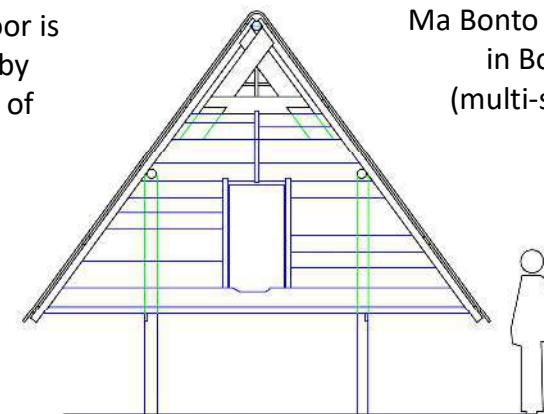


Ma Andoyé House in Boniville
(Reused Tembé and "Saramaka" style door decoration)



Ma Bonto House in Boniville
(multi-storey)

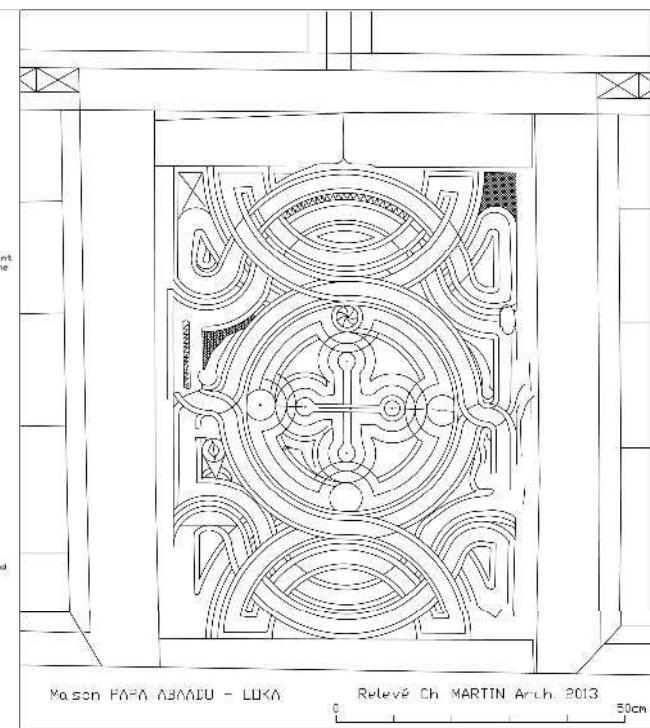
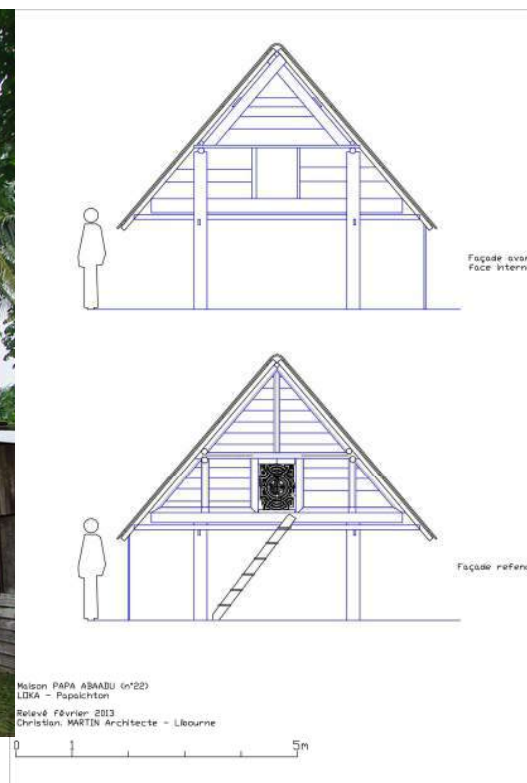
The first floor is supported by the 6 posts of the typical structure



Façade arrière

(Tembé and ventilation triangle at the top of the gable)

Papa Abadu House in Loka



Timbé of the door
of the room

(raised, following the same construction model.
 The 6 posts support the floor)
 With Timbé inside and "balcony" open to the river

Views of the village



Houses in the
historic centre



New houses on the
outskirts of the village

Access to the village by pirogue.
The houses benefit from the fresh air coming from
the river

Life in the village

Despite the exodus to Maripasoula or Saint Laurent du Maroni, the Boni villages are still inhabited, and the children return to the house where they were born for traditional festivals (holidays often linked to death after a death)



"Faya osu" (house of fire): Community kitchen and place of sociability (preparation of the couac from cassava)

The child's stroller (to the left of the door) bears witness to a village that is still alive

Places of worship in the village



"Faaka Tiki" ("flag in the wind")
(worship)



"Obia Osu" – cult of Mama Goon
House of the Earth Goddess

"Restoration" of 6 houses in 2017 / 2020

This work-school was supervised by the Amazonian National Park of French Guiana and the Municipality of Papaïchton.

It has enabled the training of some young people from the village and the awareness of the ancient heritage of already experienced building craftsmen.

The notion of Restoration (as defined by the Venice Charter), is difficult to understand by the local population. Few elements have been preserved. It is a reconstruction close to the same that has been carried out. . Perhaps a first step towards a real protection and restoration of this identity heritage.

Two local experts, an artist in "Tembé" and a wood specialist brought their knowledge.



The choice of woods

The species of wood used have been chosen according to tradition and their resistance to humidity and insects:

Wakapou: wood that is not attacked for posts, lomalikis, frame and kopo.

Gombé (eel wood), for purlins and rafters

Angélique for floors and side facades

Mahogany or Black Cedar for the main facades

Wapa for skirting boards in contact with the ground.



The training project
(Villages of Loka and Boniville in Papaïchton)



Papa Topo House in Loka

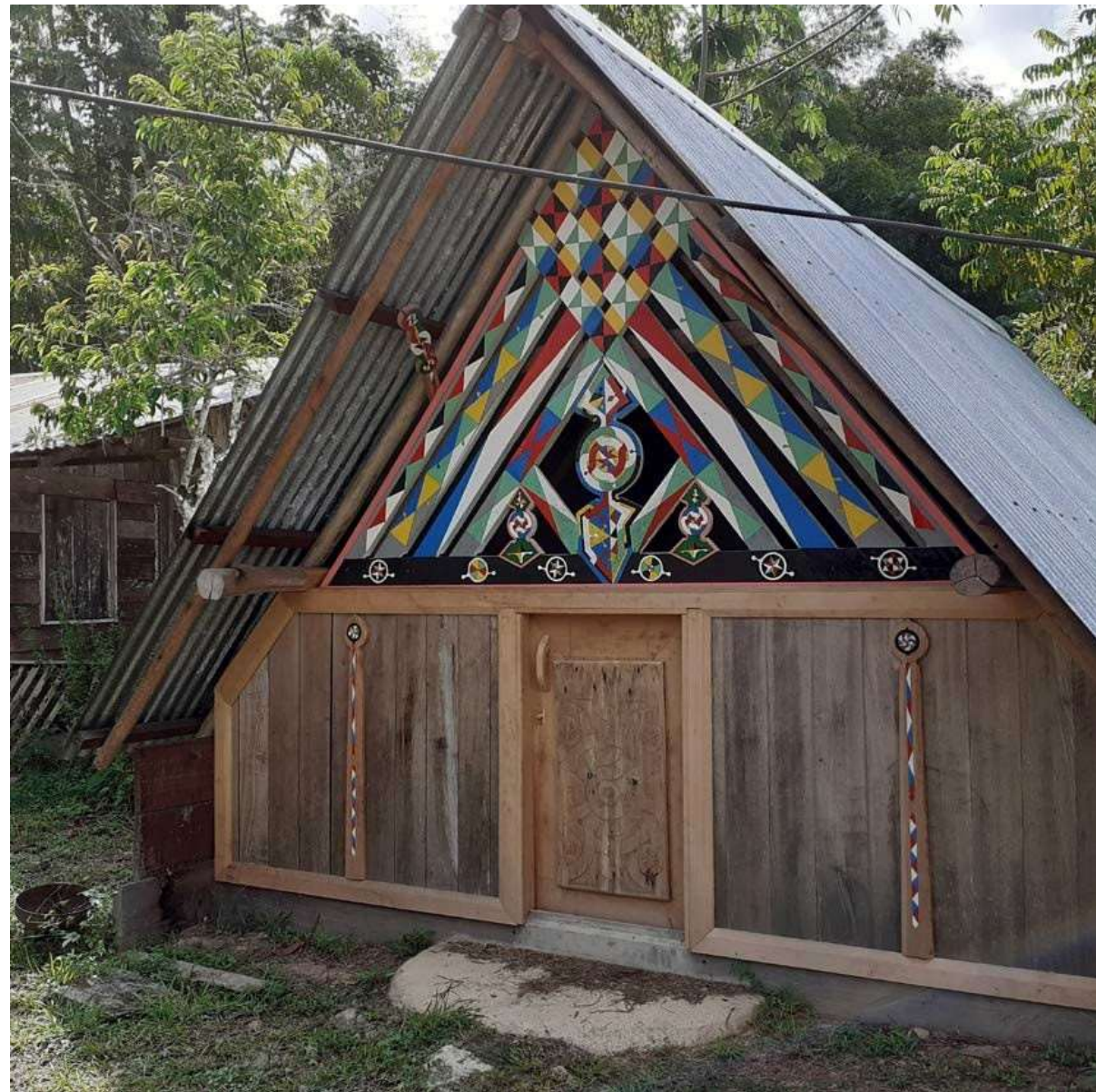


Ma Bonto House in Boniville

Mr. Raymond's house "restored" in Loka

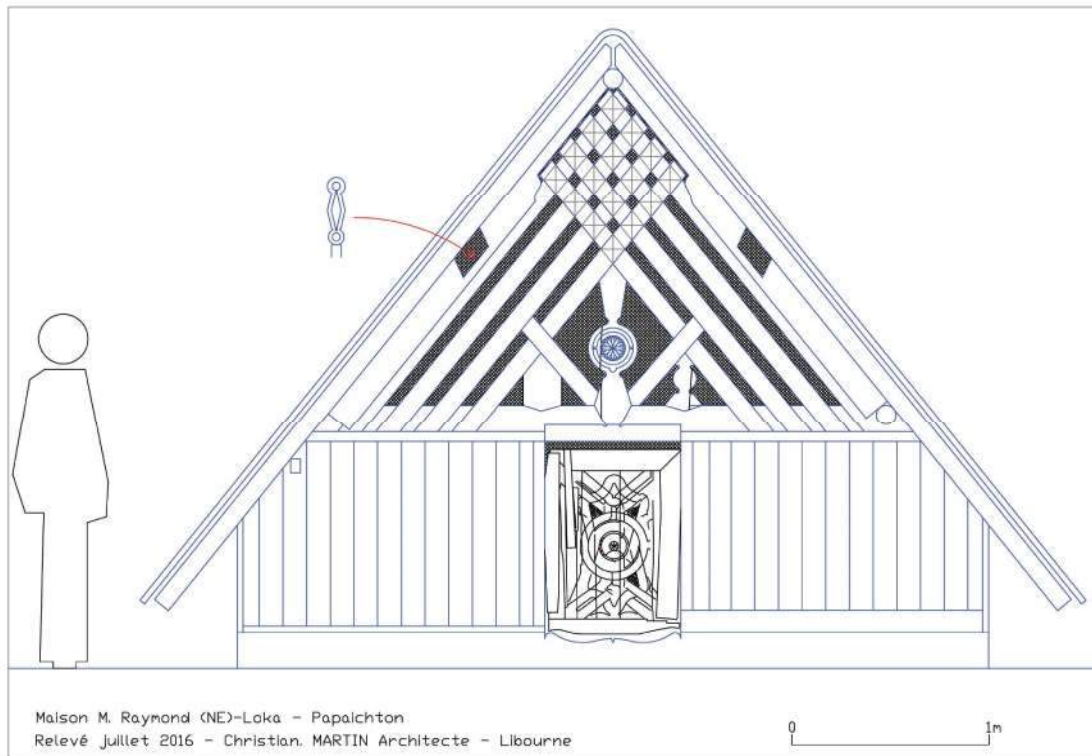


Before (with Temb , kopo, touipi and inner temb )



After renovation

Mr. Raymond's house "restored" in Loka



The "Kopo" redone



Papa Bala's House in Loka (Customary Chief)



Before



After renovation

Papa Topo's house in Loka (former village teacher)



Before



After renovation

(Sociability benches, restored under the porch)

End of the school project and graduation ceremony (2021)



Les trois apprentis (Orphéo Atromoi, Daniel Othily, François Guimé), avec leur encadrant ONF (Joseph Ateni) et des agents du Parc amazonien (Fanny Rives et Taouine Kouata).



The traditional "Creole" house

Examples in Sinnamary

The architecture of the Creole house is inspired by European wooden houses (Normandy, Great Britain, etc.), imported to the Americas by shipwrights from the 17th century onwards.

(With occasional passage through French Acadia, in North America)

The Creole house of Guyana is a house with a wooden structure, adapted to the tropical, hot and rainy climate.

The traditional house offers living comfort, without the addition of air conditioning.

2 types of houses (always on the same models):
The house on the ground floor ("case"), and the two-storey house.



Sinnamary

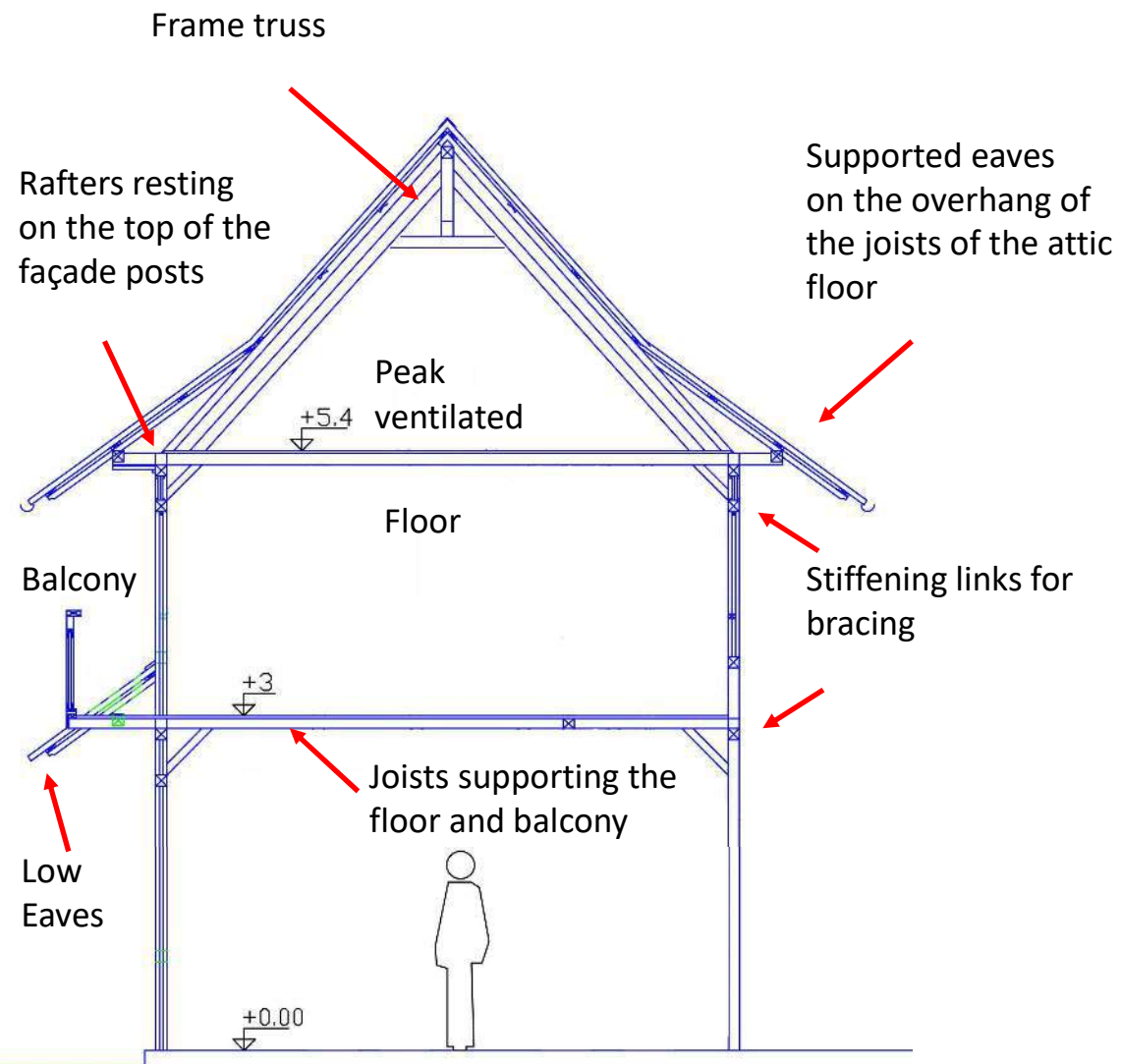


The main streets, oriented towards the river and in the direction of the prevailing winds, allow better ventilation of the houses in the village

Streets of Sinnamary

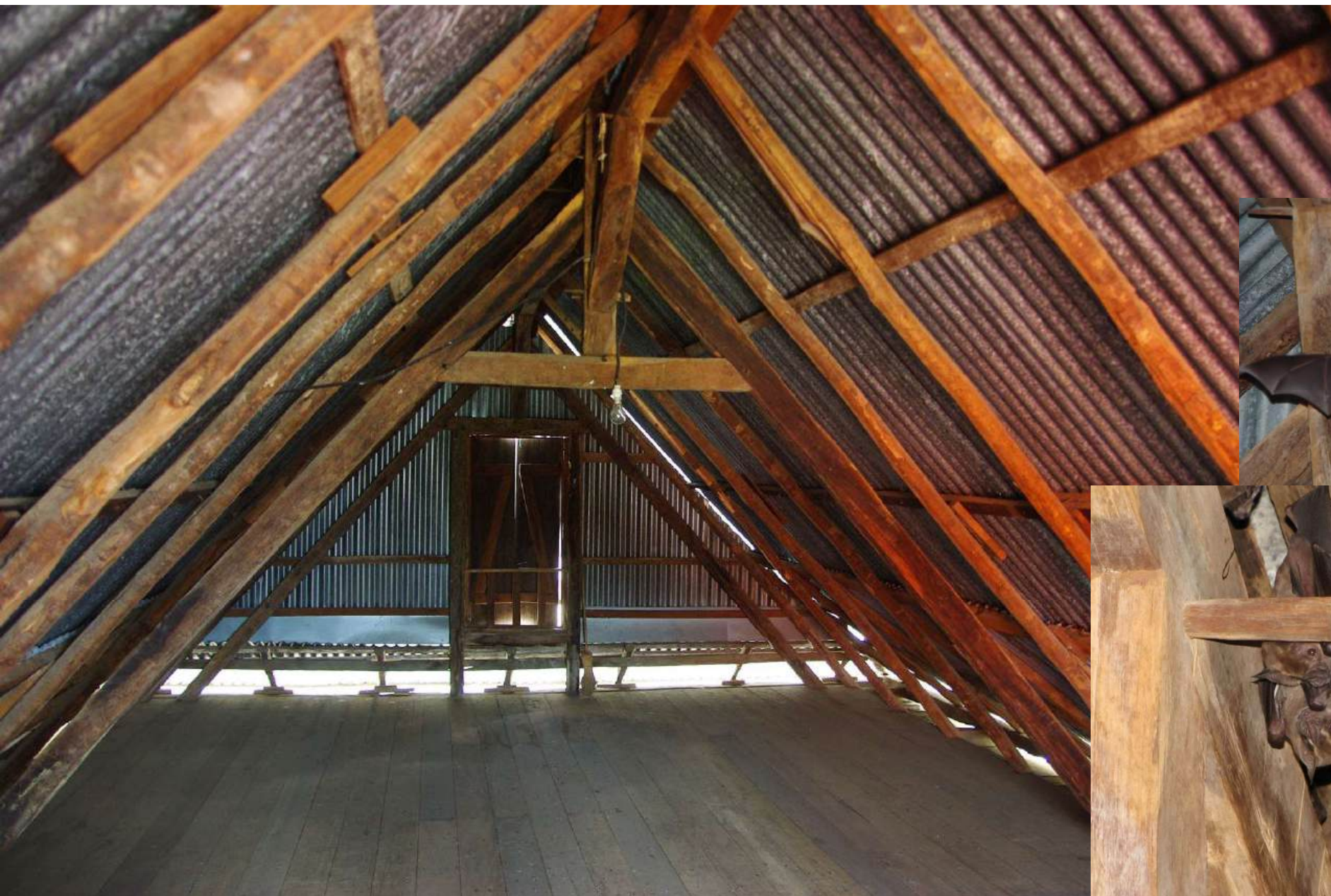


Schematic diagram of the structure the 3 transverse gantries



Didine House - Sinnamary



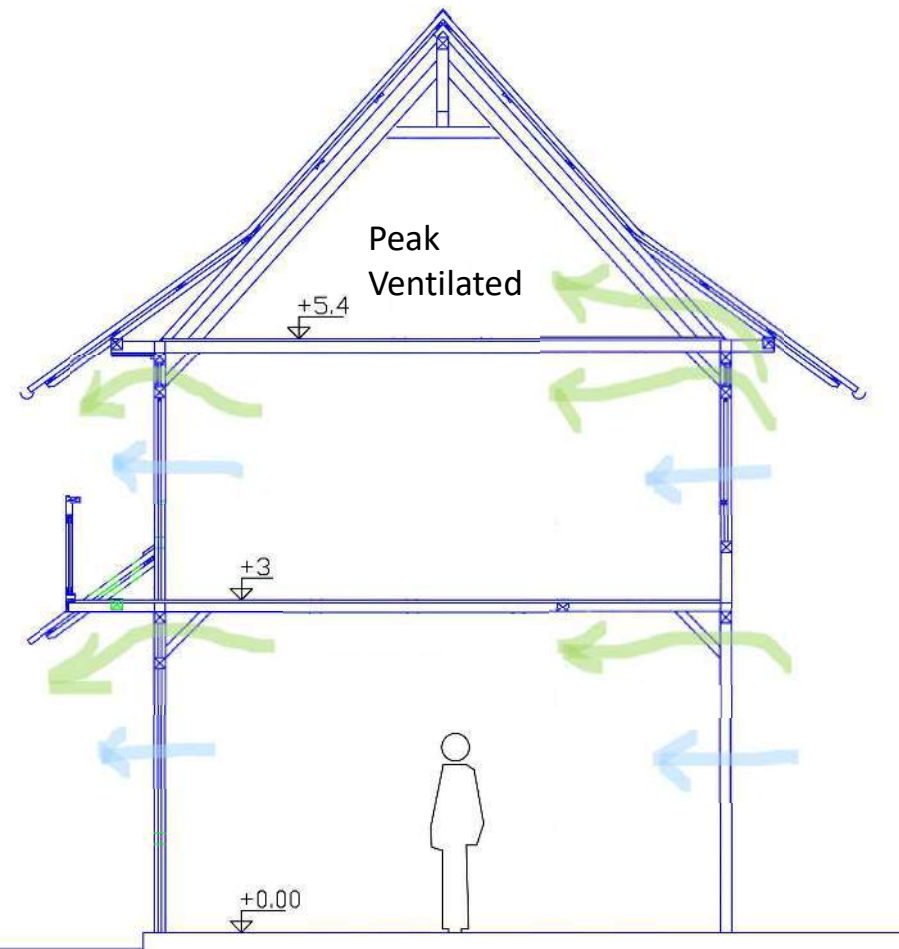


Didine House
The ventilated
attic and the bats
that live there



Cooling by air circulation

Unlike recently built houses, a traditional Creole house is **comfortable without air conditioning**.



Didine House - Sinnamary



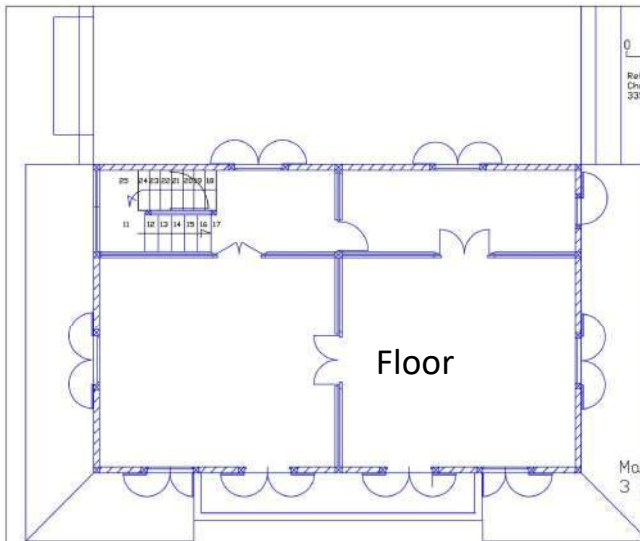
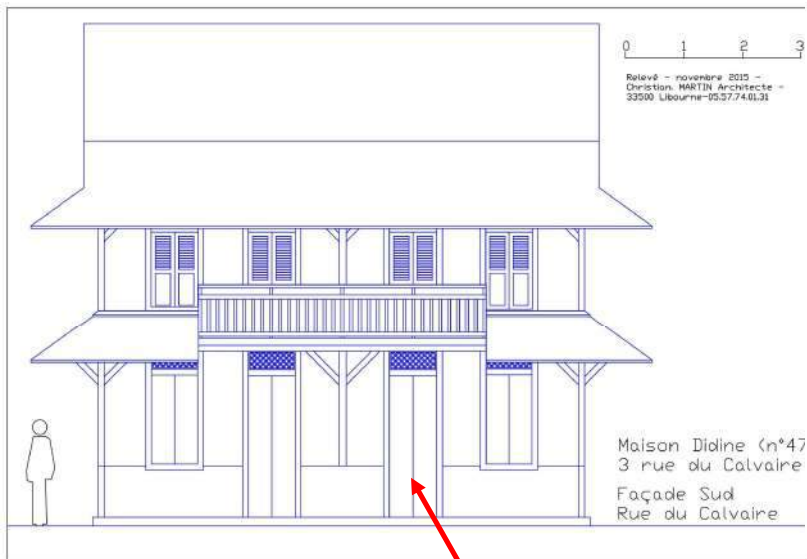
Permanent ventilation to the outside and between interior rooms, through the transoms (flush with the ceilings)

Adjustable ventilation via shutters, shutters and sashes

(Now, openings are often protected from insects by the installation of fine mesh)

The plans

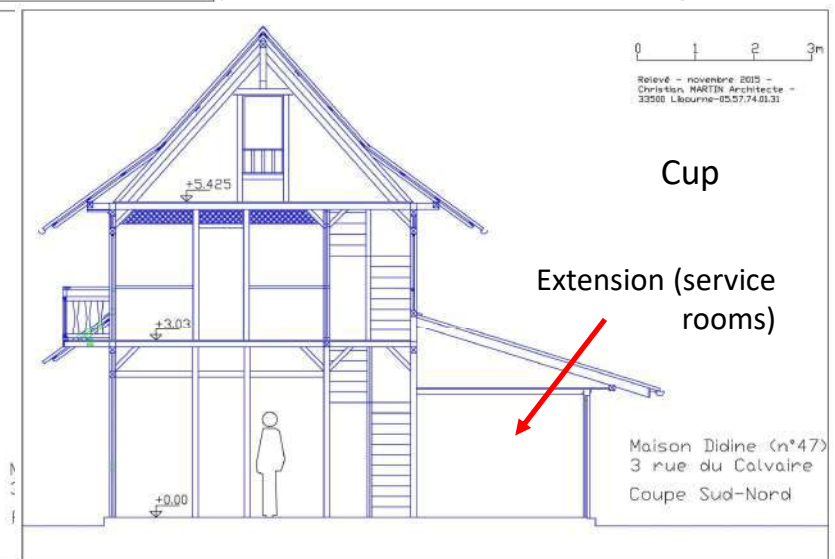
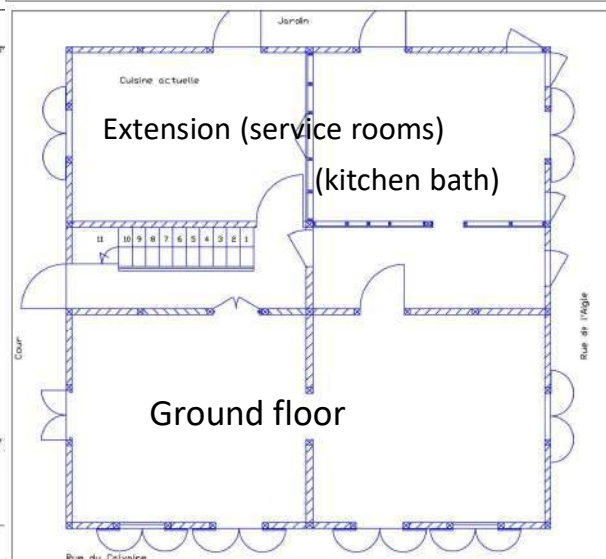
Didine House - Sinnamary



(wooden partitions with stiffener at mid-height)



Shutters
(opening)
in ground floor





Hermégégilde Tell House Museum (Cayenne)

The living rooms are
widely ventilated
(transoms, movable
shutters, shutters)
The openings are in
the shade of the eaves



The kitchen and the
bathroom are in the annex
volume of the service
rooms



Roof

Wapa wood shingles are now replaced by metal sheet, (thermally harmful), but are again used on some constructions.



Decorative
valance

Customizing a
gable





The walls

Filling of the
wood frame
with
plastered
bricks



←
Pegged and
prefabricated
timber frame
with
numbered
assembly
signs





Filling of the wooden frame with mud cob placed on a slatted, braided (gaulettes) and plastered.

At the bottom of the wall, the earth filling, does not resist humidity well



Currently being demolished



Doors and windows

On the ground floor, the openings are protected by solid shutters

At the back, the openings are equipped with low doors and windows, with screens preserving privacy and ensuring ventilation.

(The low, sliding window is removable)
A lace curtain completes the protection against insects and gives a touch of coquetry.

A ventilated transom is located above.



Upstairs windows

- Upstairs, the windows are equipped with shutters ensuring privacy and ventilation.
- Lace curtains complete these screens and protect from insects.
- The upper transom provides ventilation at the level of the ceilings



The transoms are architectonic elements of identity, in Sinnamary as well as in Cayenne or Mana



Some houses in Sinnamary



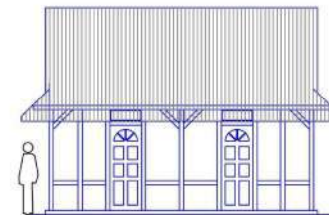
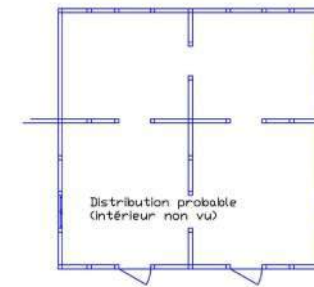
In general, the structure is clad in wood, upstairs and a balcony is often installed.

Birthplace of Henry Salvador



The « huts »

The huts, without floors, have the same type of wooden structure as the two-storey houses.



Relevé - novembre 2015 -
Christian MARTIN Architecte - Libourne

Maison n°51
Angle 39 Bvd Vernet
et 11 rue du Calvaire



The huts are equipped with screen panels and transoms that allow them to be ventilated



The "gaulette" houses

This type of precarious house, now abandoned, was used by forest workers.

They have a wooden frame of the same type as the Creole huts, but the walls are made of woven wooden slats, allowing air to pass through. (the "gaulettes")

Gold Prospectors' Village
With wooden shingle roofs and
"gaulette" facades

(Photo early 20th century)



Houses "in gaulettes"
From Sinnamary

They are in ruins and located in an area overgrown with forest.

Most of the walls are made of braided "gaulettes", or "ventelles"
(ventilation slats)
Some walls are clapboard
They are equipped with a gallery and an attic.

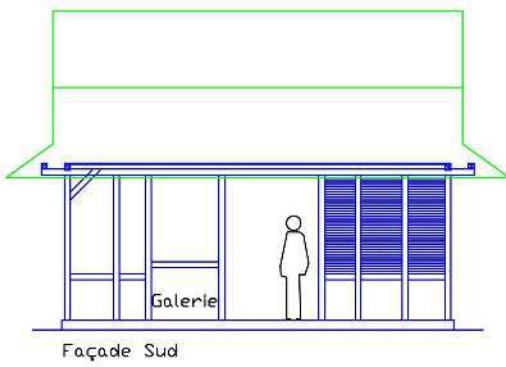
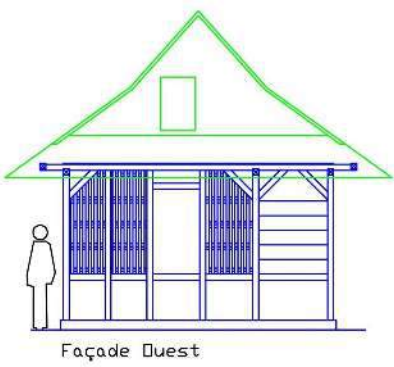
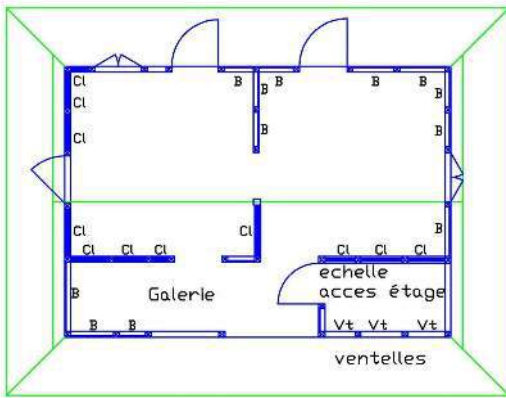


gaulettes



ventelles

View of the la gallery



Current modern buildings and extensions



Ugly and incongruous collective housing

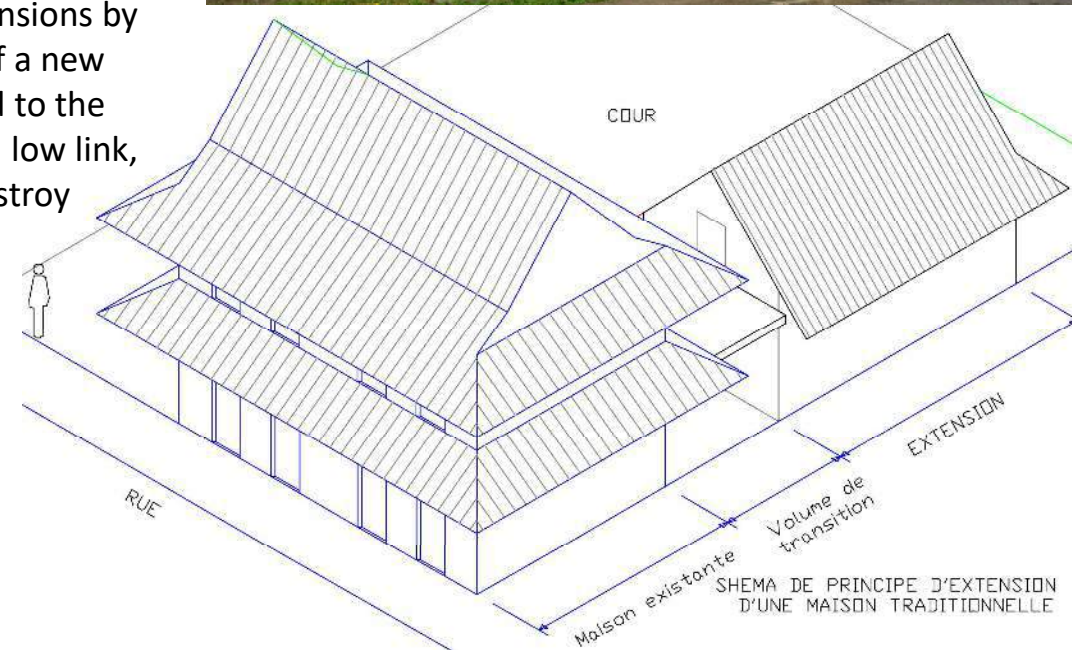


Villagehall, financed by Soyouz which launched rockets from Sinnamary (near Kourou)
Located on the outskirts, it does not impair on the village

Skylights
and parasitic
extensions
destroyed the
eaves and
disfigured the
house



Home extensions
often disfigure the original
traditional construction.
It is proposed that the
urban planning by-law
should favour extensions by
the construction of a new
volume, connected to the
existing house by a low link,
which does not destroy
the eaves



CONCLUSIONS

The traditional houses of French Guiana are adapted to the tropical climate.

Boni houses do not correspond to the current way of life, but are an identity heritage that must be preserved. The Papaïchton worksite-school is the beginning of an awareness of protection, which must be followed by other development operations.

The traditional Creole house is also a heritage to be protected. (Urban planning by-law to come?) It is suitable for a comfortable lifestyle in a hot and humid climate.

Existing houses must not be disfigured by unnatural additions.

Their design method must be a source of inspiration for contemporary bioclimatic architectural creations.

Thank you for your attention
Christian MARTIN - Architecte

