

# The Guatemalan Experience

- Actual Ley General de Telecomunicaciones (since 1996) allows the allocation of spectrum in three groups of bands:
  1. Reserved for government use
  2. Reserved for amateurs
  3. Regulated bands



# Reserved Bands

- For government use: 1,331 MHz in total, distributed in the bands recognized by UIT but mainly from 3 KHz to 3000 MHz
- For amateur use: 4,761 MHz in total, mainly distributed from 1.8 MHz to 250 GHz

Users in these bands, receive an AUF – Autorización de Uso de Frecuencia- which cannot be sold or transferred outside of the government environment.



# 'Regulated' or Liberalized Bands

Users receive a TUF – Título de Usufructo de Frecuencia – which can be traded and has flexibility under technical constraints. In these bands are included the frequencies used for wideband.

TUFs describe: Max. transmission power, Coverage area, Max interference at border of coverage area and schedule of operation.



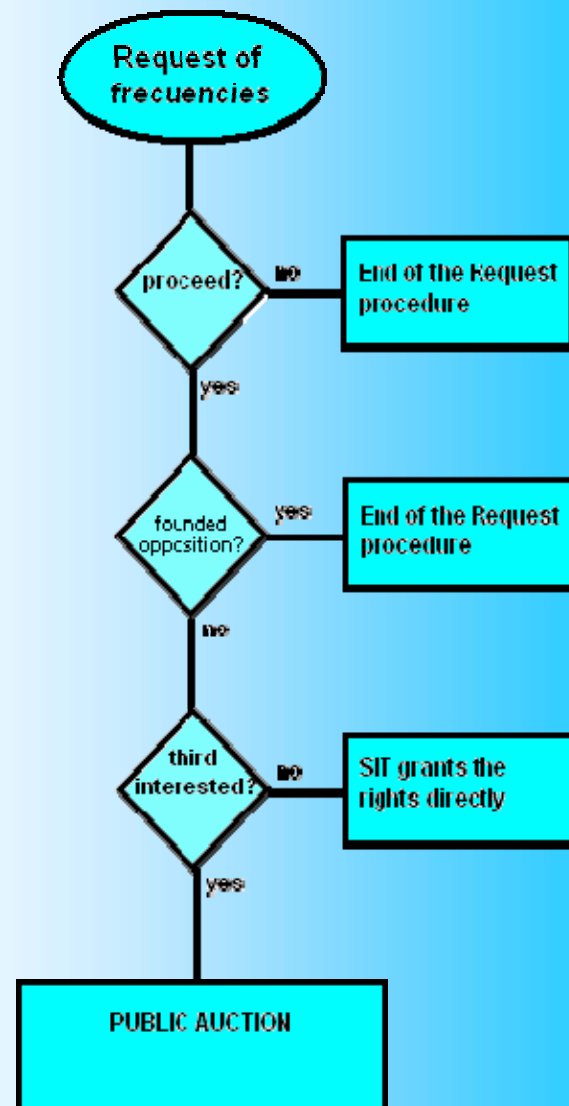
# TUF vrs Licenses

- In general, a spectrum license is a right to a particular use. With some spectrum, a licensee may choose among several uses.
- A TUF is essentially a property right, with the freedom to use the spectrum as one sees fit, subject to technical restrictions.



# Allocating TUFs

- Parties submit requests, government must publicly announce request in three (3) days.
- Only reasons for denial: violation of international treaties, or existing right held by another.
- Third parties may oppose, but must do so within five (5) days of end of public announcement.
- Within fifteen (15) days, an auction is announced, which takes places within next twenty (20) days.



No. Orden 05395

No. Registro 4839

**LA SUPERINTENDENCIA DE  
TELECOMUNICACIONES DE GUATEMALA**

Con base en el Artículo 57 del Decreto 94-96  
del Congreso de la República  
extiende

**Título de Usufructo de Frecuencia**

A:

**DIRECCION GENERAL DE RADIODIFUSION**

**Banda o Rango de Frecuencias** : 107.40000 a 107.60000 MHz

**Horario de Operación** : VEINTICUATRO HORAS

**Potencia máxima efectiva de radiación** : 67.00dBm

**Máxima intensidad de campo eléctrico o  
potencia máxima admisible en el contorno:** -90.00 dBm

**Area geográfica de influencia** : JUTIAPA, IZABAL, SAN MARCOS,

**Nota:** Sujeto a las especificaciones Técnicas contenidas en la Resolución  
SIT-771-96 Y SIT-054-2001

**Fecha de Emisión** : 20/11/2001

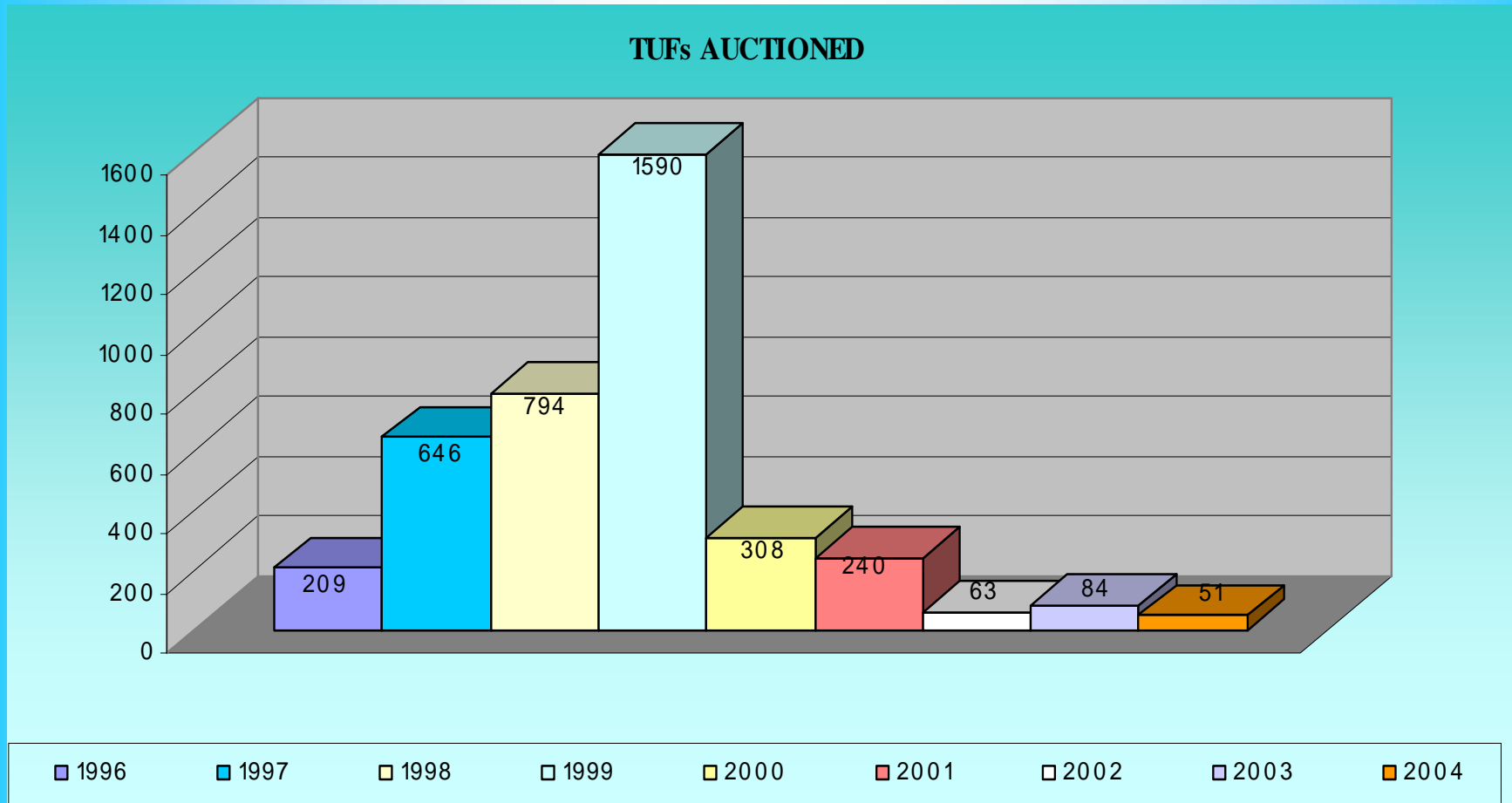
**Fecha de Vencimiento:** 17/12/2011

**Sample**



**Ing. José Orellana Mendizabal**  
SUPERINTENDENTE DE TELECOMUNICACIONES

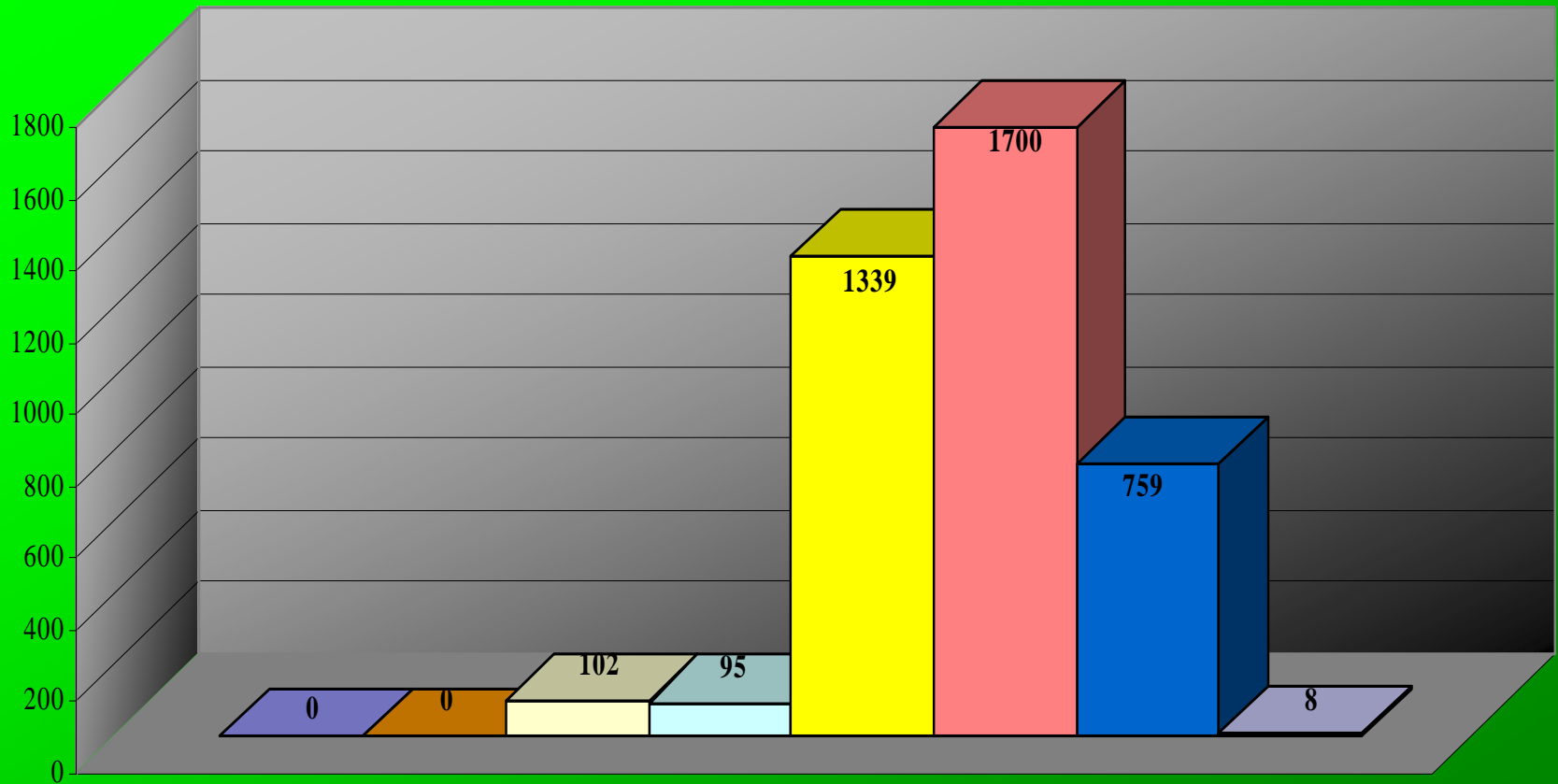
# Guatemala: TUFs Auctioned and Traded



TUFs traded: 1,621 (or 41 percent of total)



# TUFs granted by band



VLF

LF

MF

HF

VHF

UHF

SHF

EHF



# Spectrum allocation for broadband fixed wireless access

- For those bands where broadband systems operate, exists an small number of rights, however the telecommunication law allows negotiations and agreements in a secondary market between new users and owners of rights.
- In order to allow the massive access to broadband systems, the regulator is doing the necessary work to relocate in a near future actual rights in these bands.



# Spectrum allocation for broadband fixed wireless access (cont.)

- These efforts are being made due to the accelerated growth in the use of broadband technologies, which is consequence of the flexibility of the Law of Telecommunications.
- The objective of the regulator, is to declare the bands used by broadband fixed access systems, as a “Non Licenced” but technicaly regulated.



# Overall issues observed with the Guatemalan Experiment

- Not many, as predicted by critics.
- No “chaos in the market” – especially in the highly valued mobile telephony uses.
- Still a need for enforcement, especially with TUFs used for broadcasting.
- No definition bands for special usage, like the ones oriented to fixed wireless broadband.



# Summary

Guatemala has very little problems with regard spectrum allocation, as compared to most any other country. The lack of enforcement against pirate broadcast radios is the only significant exception.

Before new technologies introduction, the regulator works in order to allow deployment of them in the country.



# What Consumer Welfare Gains Really Mean



# **Juan Pablo Velásquez**

Superintendencia de Telecomunicaciones

de Guatemala – SIT -

[jpvelasquez@sit.gob.gt](mailto:jpvelasquez@sit.gob.gt)

