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Calidad Celular: Case for Colombia

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Calidad Celular - The Purpose

- Until now there has been limited visibility in the true *Quality of Experience* for mobile subscribers
 - Smartphone on forefront is changing the paradigm
 - By obtaining information directly from the device, visibility into actual performance as experienced by the end-user can be realized
 - Mobile subscribers don't know who to trust regarding network service quality
 - Mobile Operators rank lowest in providing services
 - Cellular Industry ranks #1 in customer complaint

The Purpose – for MinTIC

- **Significant ongoing growth in mobile for Colombia**
 - Biggest development hubs in Latin America
 - Government recognizing importance of Internet connectivity – creates jobs, educate citizens
 - Accolades: Winner of GSMA Government Leadership Award 2012
 - vive digital – initiative x4 internet connections in 4 years
 - June 2013 Auction LTE
 - 5 licenses awarded; LTE rollout completed mid 2014
 - International Investments: Top players (ie. Facebook) having particular regional interest, establishing local presence
 - Increasing demand for data
 - Introduced the **Calidad Celular** Program – 1st Country
 - Launched August 8th: 90k users, 2M daily events
 - Independent neutral 3rd party perspective
 - Based on **real** measurements in **real** life situations
 - Gives users a tool and a collective voice

The Process

- 1 Calidad Celular Client**
Custom client designed for MinTIC



- 4 MinTIC promotes activity**
Press, social media



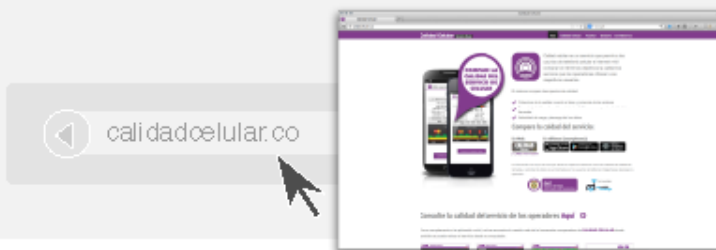
- 2 Public View**
Designed according to MinTIC requirements



- 5 Users Download App**
Users download Calidad Celular App and begin crowd-sourcing measurements



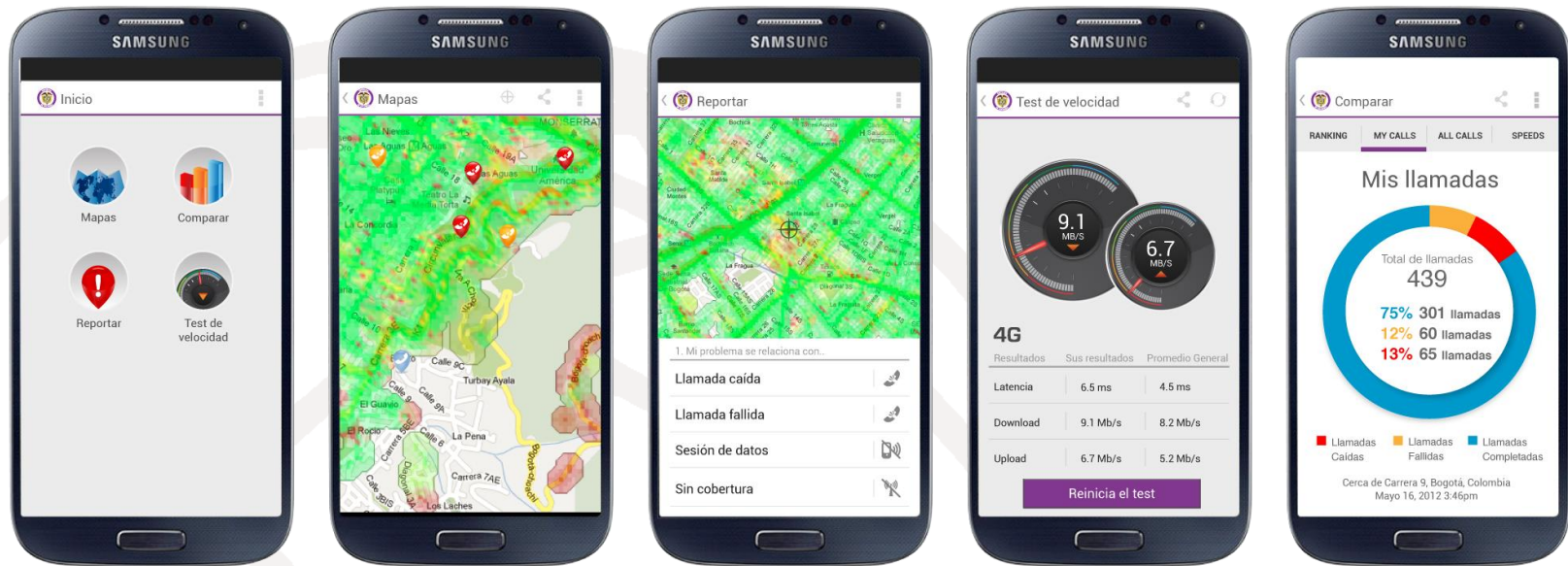
- 3 MinTIC hosts portal**
Informs initiative, publishes, and promotes use



- 6 Monitoring of Results**
Quality of Experience, KPI Analysis



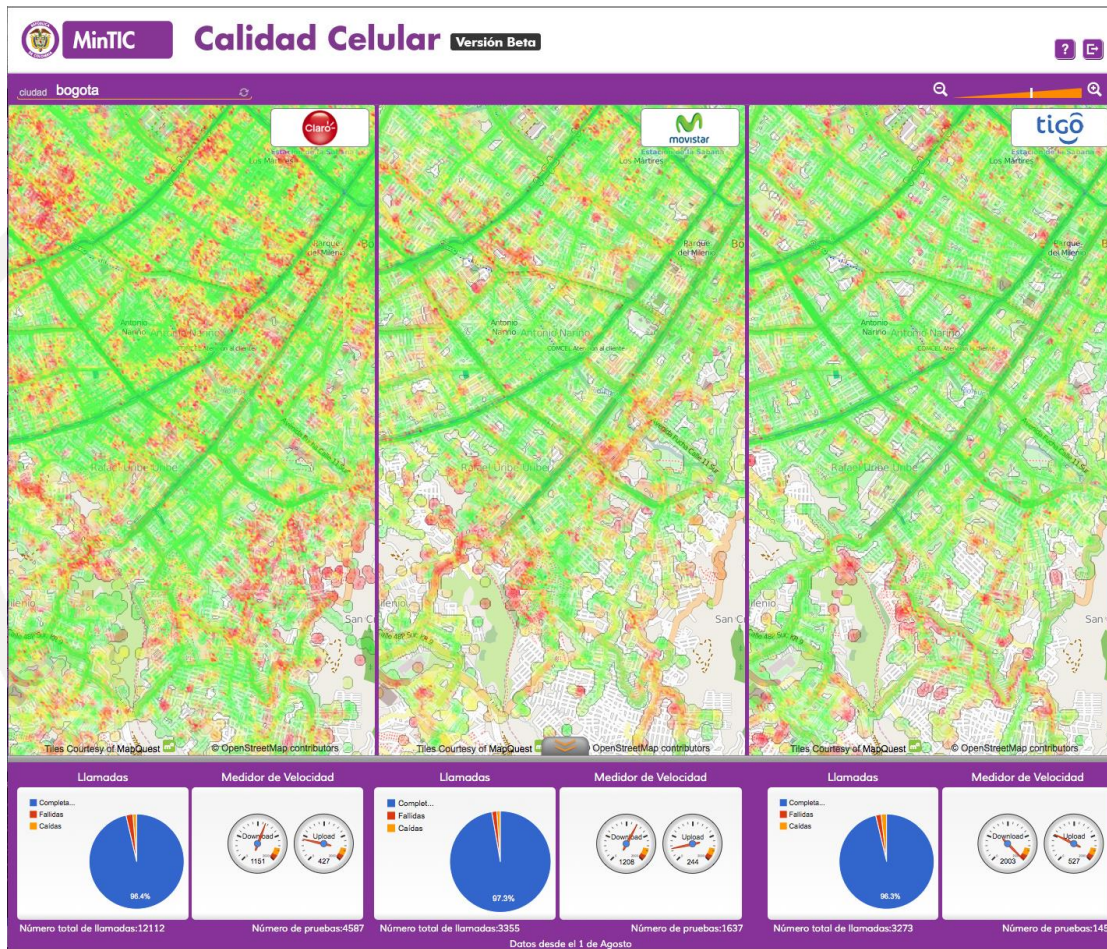
Public Smartphone Application



Leverages the power of crowd-sourced data collection

- Free to consumers, downloaded from App Stores, simple and intuitive UI
- Runs in the background, no data consumption in Wi-Fi mode
- Data collected: RF environment, GPS, device
- User Opt-in, not intrusive, no key logging, no URL logging
- Issue reporting mechanism, subjective mood
- Minimal battery consumption (< 5%)
- Customized screens to meet the needs of MinTIC. ToS & Privacy Policy according to Colombian law.

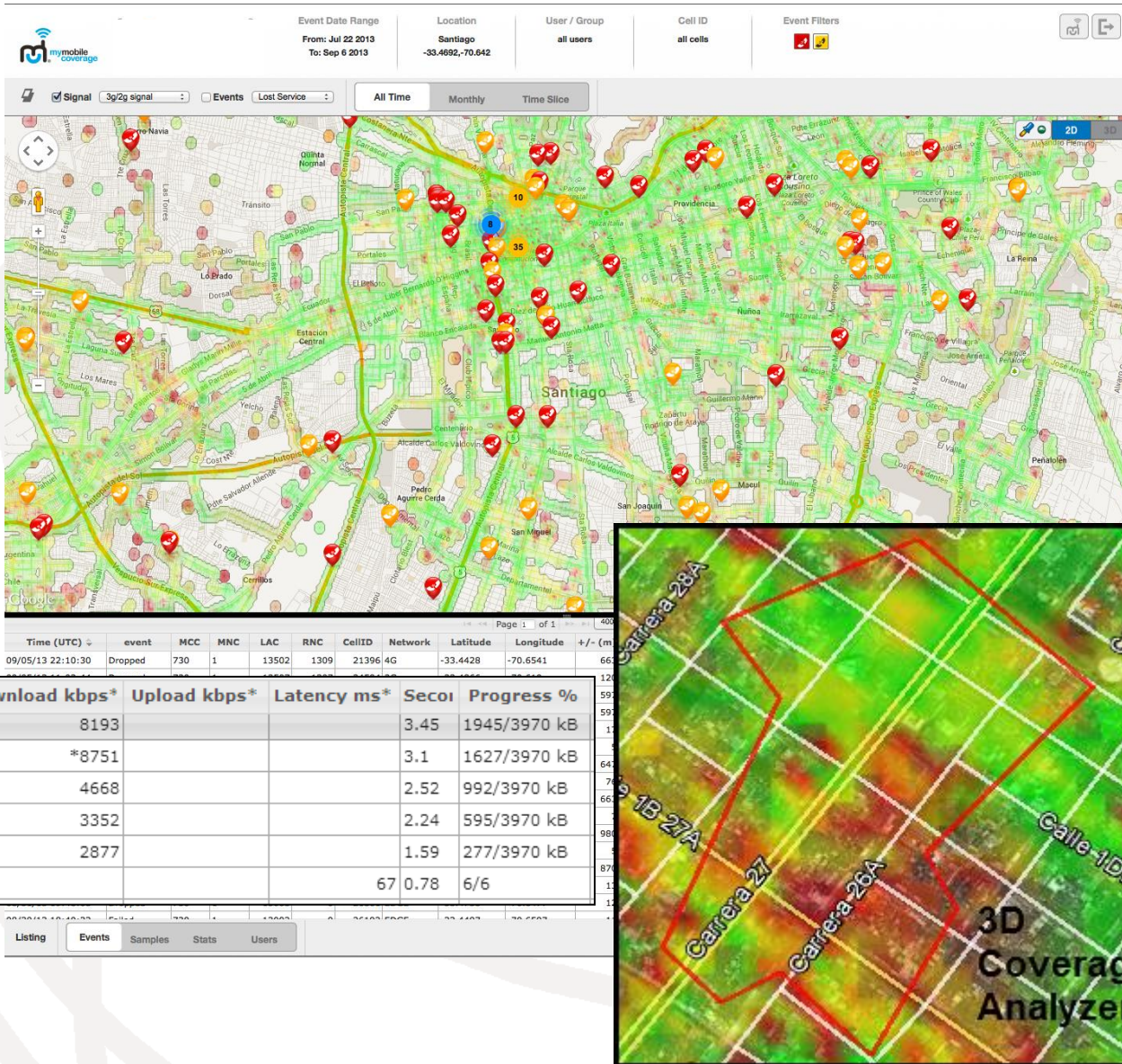
Public View Portal



Allows citizens to compare coverage of operators in a side-by-side view.

- Reliable, simple, aggregate view of coverage using thermal heat map
- View top-level KPIs: dropped calls, failed calls, data throughput speed
- Inform and help people to make the right decisions

MinTIC Network View

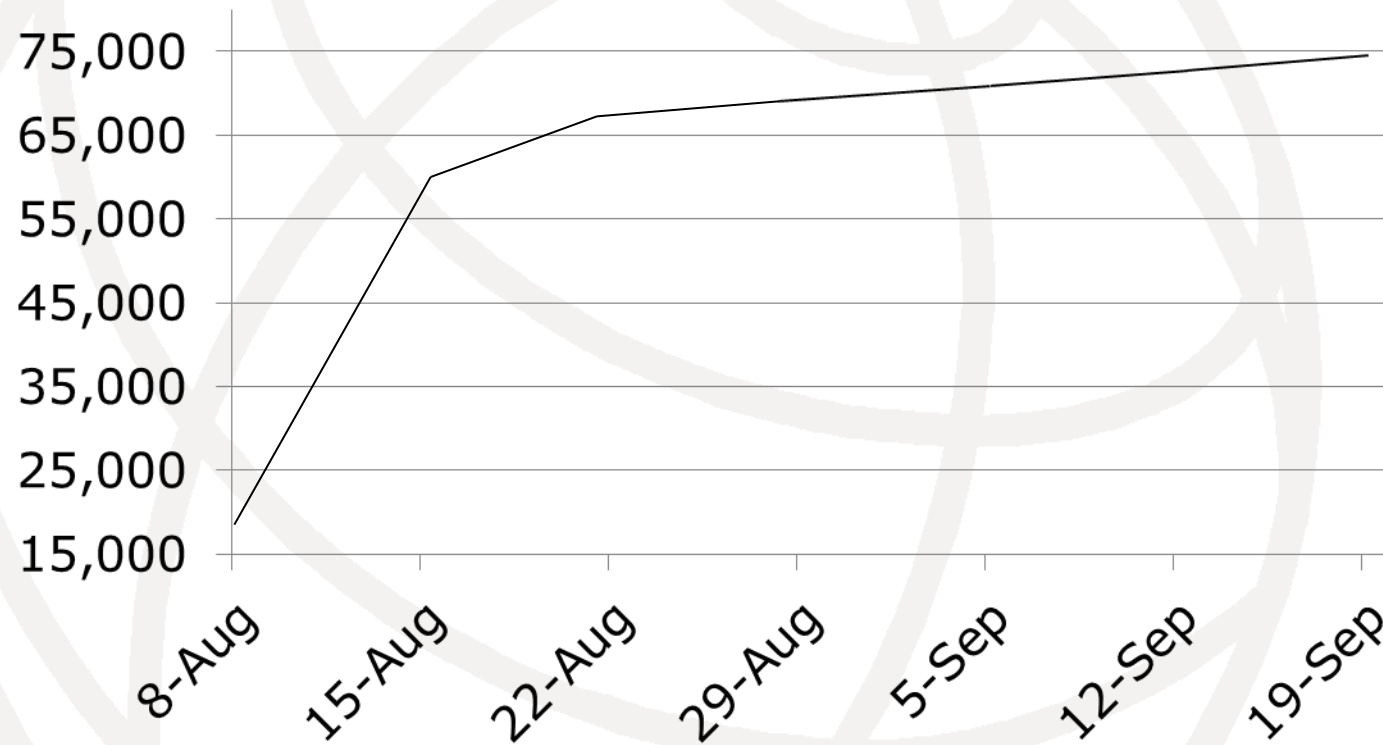


Server visualization tool enables a MinTIC to gain quick, easy visibility into network performance statistics.

- Filter, view, and examine specific network events (dropped calls, slow data, poor service)
- Detailed coverage analysis, detect areas with problems
- Validate the level of service network operators claim they provide

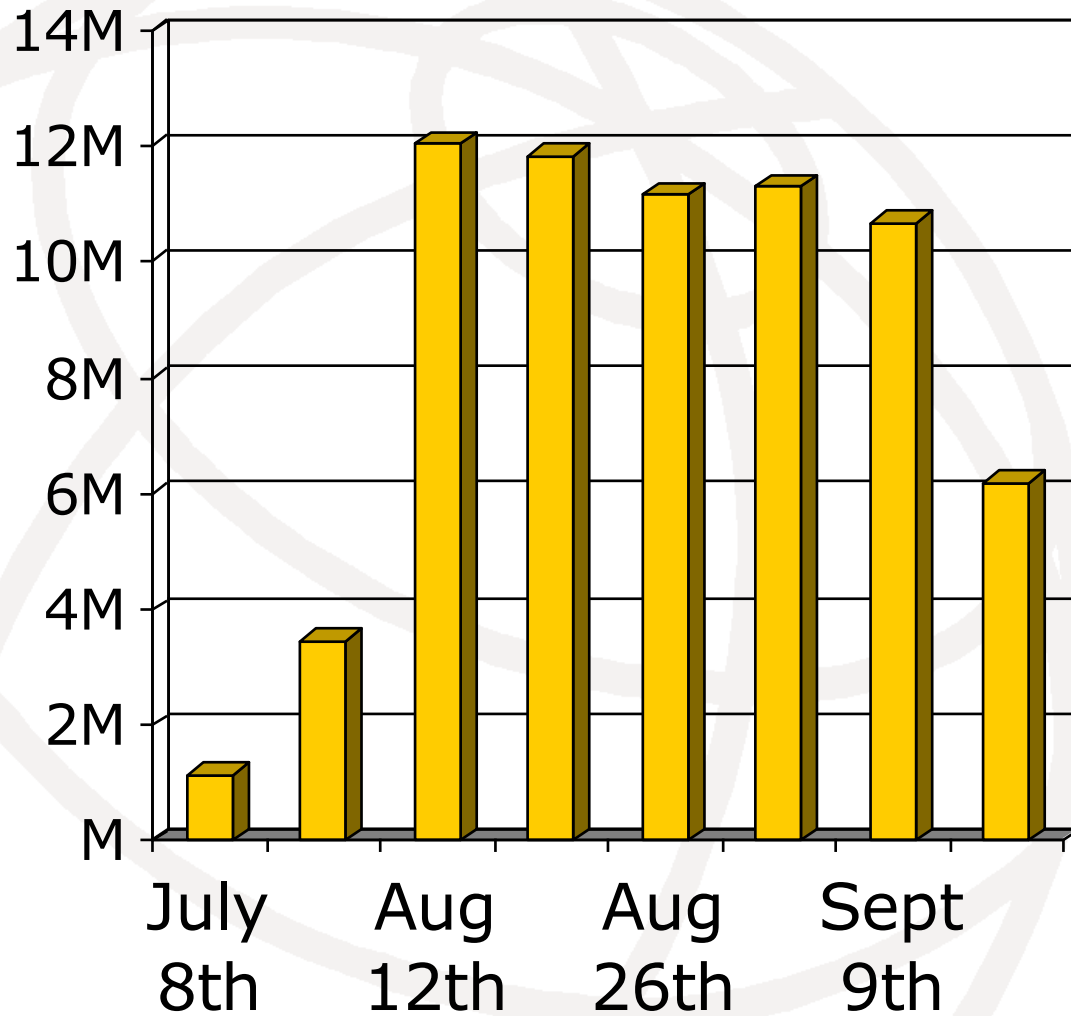
Number of Downloads - Colombia

- Outlines the trajectory of downloads in Colombia since launch of project



The download trend experienced quick upstart upon publicity launch and is currently experiencing steady gains.

Calidad Celular Events Collection



~ **2M daily events**
Stored in the system

Weekly Events

Conclusions and Recommendations

- Define clear set of rules and regulations
 - Reach out to Network Operators
 - Inform objectives
 - Inform intentions

- Define levels of quality
 - Example: In Colombia -95dBm is the lowest acceptable 3G signal strength at the street level

Conclusions and Recommendations

'App' que mide calidad de servicio celular no es confiable: Asomóvil

El Tiempo - Redacción - 14.08.2013, 08:11



asomovil

Apps



Tras el anuncio del Ministerio de las TIC del plan nacional de mejoramiento de la calidad del servicio celular, el cual contempla, entre otras actividades, la implementación de un sistema de medición y compensación del servicio en todo el país, los operadores móviles expresaron sus inquietudes y dudas sobre la efectividad de las medidas.

➤ Operator reaction:
Uncomfortable and exposed

- Disqualify program
- Distrust user originated measurements
- Suggest other methods under their condition

Conclusions and Recommendations

- Allow transparency in information, analysis & findings
- Continuous promotion of Program
 - Public Portal
 - App download
 - Use of Social Media
- Program Results: Enforce and ensure a increase in mobile Quality of Experience

Thank You



MinTIC
Ministerio de Tecnologías
de la Información y las Comunicaciones

