

## **Network Capabilities**

WIFI NETWORK CAPACITY
64.000 Concurrent Users

INTERNET

Throughput 10Gb (5 Gb in HA configuration)

CABLING CAPACITY

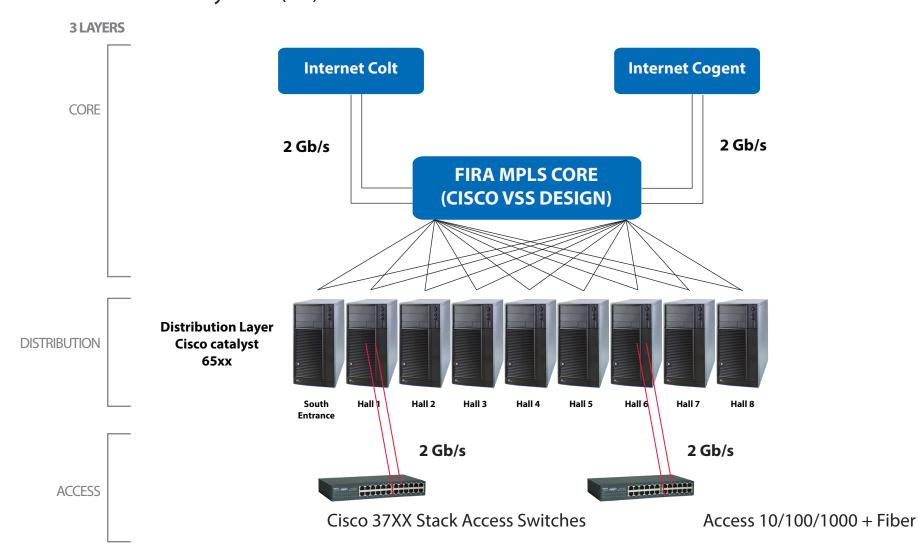
16.000 available ports





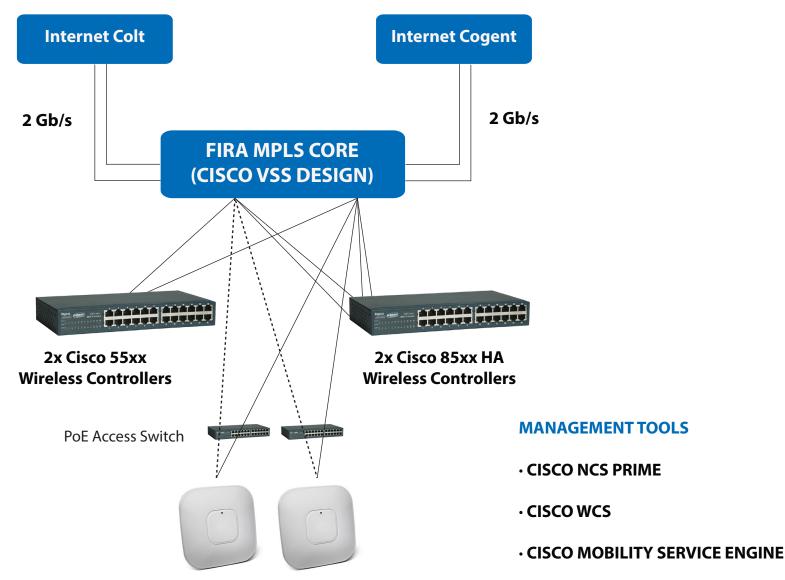
## **Network Overview**

4 CORES Autonomous System (AS)





## Wifi Network



Over 800 units of Cisco 2600, 3700 Series Access Points

## **AP Locations**



The network has more than 800 APs, approximately one every 20m, covering all exhibition areas.



## **IT Products and Services Catalogue**





### **Product Families**



There are 6 families available within our range of products:

#### **Cable**

- · Network Cabling CAT5e (exhibitor, organization, venue)
- · Network Cabling Optical Fibre (cabling and power certification)
- · Phone Cabling
- · Cable Tagging
- · Corridors Cable Patching
- · Cabling and Material Collection after the show

#### WiFi

- · SOHO-Like WiFi (private SSID linked to the wired service)
- · WaaS (WiFi as a Service for the whole venue with specific services)
- · Customized landing pages (HTML, authentication, reporting, final documentation)
- · WiFi Radio Planning and Customized Solutions and Designs
- · Multiple Vendor Solutions

#### **Voice / Telephone Service**

- · Installation support for POS terminals and ISDN lines
- · Supply and Installation of Analog, Digital and IP Phones
- · Management of the Corporate Phone Services and Invoices
- · Proactive Monitoring of Backhauling and PBXs Critical Events







### **Product Families**



#### **Internet Advanced Services**

- · ISP Backhaul management
- · High Level Support to Fira's providers for QoS, audiovisual broadcasting...)
- · UPS Secured Power Lines
- · Consultancy for specific requests

#### **Management Services**

- · Project Management
- · Show/Event Whitepapers
- · Monitoring Tools: customized dashboards to monitor services
- · Specific Tools Design and Development (CRM, Provissioning, Ticketing, Tracking...)

#### **Other Professional Services**

- · Custom Call Centers / Call Campaigns Management
- · Support to Attendees:
  - Frontdesk
  - · Call Center
  - · Field Technicians
  - · WiFi On-Site Regulation Team
- · Product Catalog Customization
- · Communication Policy Management for each Show
- · IT Policy Definition



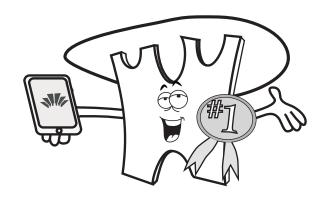




### **Successful Stories**



#### **MWC2014**



Service Figures:

22,000 Concurrent Wi-Fi Connections (World Record!!)

5,000 Wired Connections

5,000 Mbps Aggregated Throughput to Internet





#### **EASD 2013**

Service Figures: 5,382 Concurrent Wi-Fi Connections 571 Wired Connections 420 Mbps Aggregated Throughput to internet

### **Successful Stories**



#### **HP Discover 2013**

Mixed Services between Customer and Venue

### Fira provides:

- · Customized VLANs
- · Multiple Vendor WiFi Infrastructure Solution
- · Network Cabling

### Customer provides:

- · Layer 3 Management
- · NAT/PAT
- · WiFi Landing Page

Service Figures
11,000 Concurrent Wi-Fi Connections
1,000 Wired Connections
Aggregated Throughput to internet: 2,100 Mbps





### **Successful Stories**



#### VMWorld 2013

Mixed Services between Customer and Venue Fira provides:

**Customized VLANs** 

Layer 3 Management

PAT

**Network Cabling** 

Customer provides:

WiFi Access Points

NAT services for the WiFi

Service Figures:

1,121 Concurrent Wired Users

Aggregated Throughput to internet. 1,000 Mbps







## **Frequently Asked Questions**



#### Wi-Fi

#### What bands are supported?

·The new network supports the bands defined in standards 802.11 a/b/g/n/ac

#### **Venue bandwidth and potential allocation to the show/event:**

- · Currently the venue has a backhaul of 2 Gbps per Hall and the whole venue is connected to and ISP with a 2 Gbps BGP redundated line from GV and 1 Gbps from MJ (3 Gbps aggregated throughput). A higher bandwidth could be provided if required (as for MWC 4 Gbps)
- The access network supports up to 20-25 Mbps per access point radio (each AP has a 2,4 GHz radio and a 5 GHz radio) in ideal conditions (no interferences, short distance to AP, uniform distribution of client devices). The number of permanent APs per Hall is as follows:

Hall 1: 56 APs
Hall 2: 98 APs
Hall 7: 48 APs
Hall 3: 114 APs
Hall 8.0: 28 APs
Hall 8.1: 33 APs
Way, Outdoor Spaces,
Offices...

## **Frequently Asked Questions**



# Ability to monitor and control usage – e.g. can we slow down people watching sports while at the show using wifi bandwidth?

Our network can be tuned to achieve the desired requirements, allowing many filter options such as:

- Application / Protocol based filters
- · Bandwidth control per user / application
- · Traffic Shaping, Firewalling...

### Do they have any best practice guidelines for exhibitors?

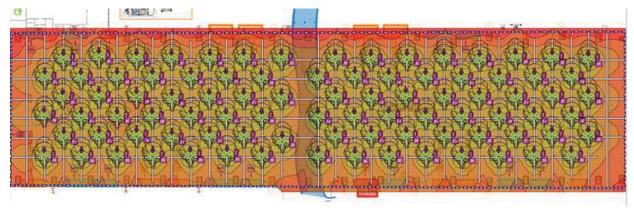
In most shows exhibitors are not allowed to use their own WiFi APs and they are encouraged to use the venue's network services in 5 GHz. The WiFi policy was distributed among all exhibitors.

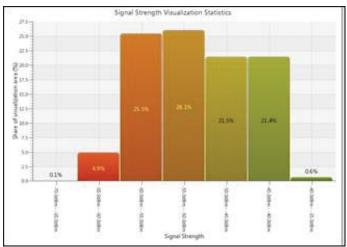
## **Frequently Asked Questions**



### Can Fira provide a heat mapping solution or provide support for it?

A number of monitoring tools is available for Fira to assure the quality of the services. Some of these tools can be made visible for customers that require such a piece of information.





### Other Initiatives



## **Smart Services**

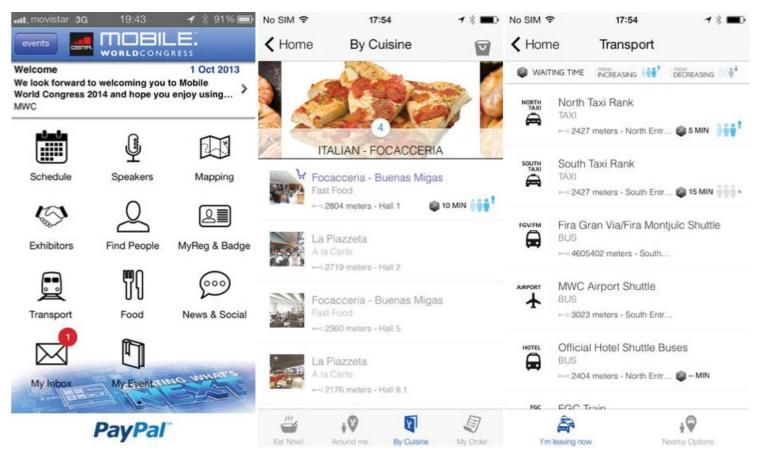














## **Smart Services - Mapping**







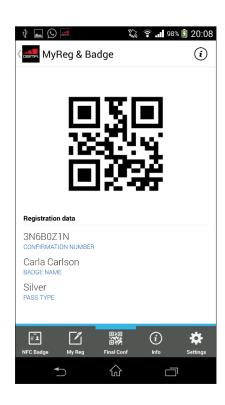
3D MAP
Includes most important references of the environment
More than 250 Points of Interest
Geolocalization
Navigation
Time Calculation

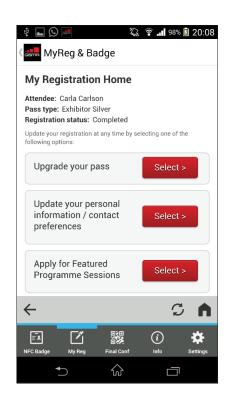
### Other Initiatives



## **Smart Services - Badge**



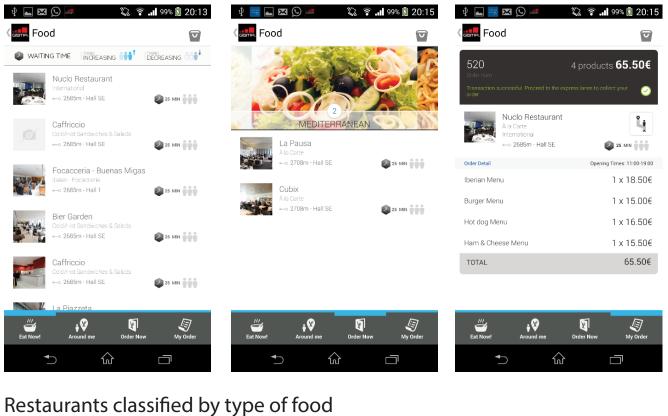




Automatic picture validation for registration Paperless: Final Confirmation with QR code Upgrade options within the app



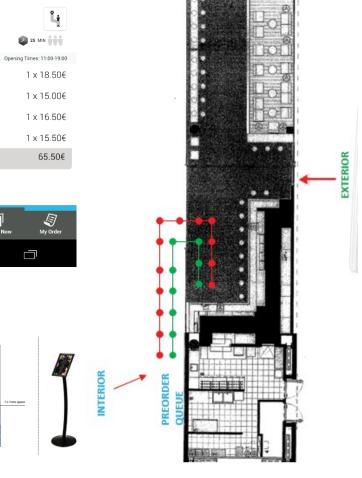
### **Smart Services - Food**



Queue time Information and Evolution

12 restaurants with pre-order capability

Map integration: route to restaurant and time for arrival



SMART Food

Point
your voucher here
NFC TAG











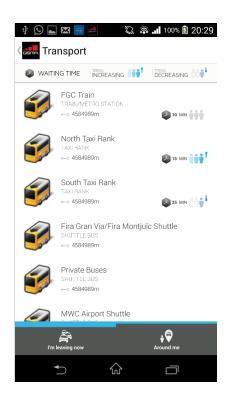




### Other Initiatives



## **Smart Services - Transport**



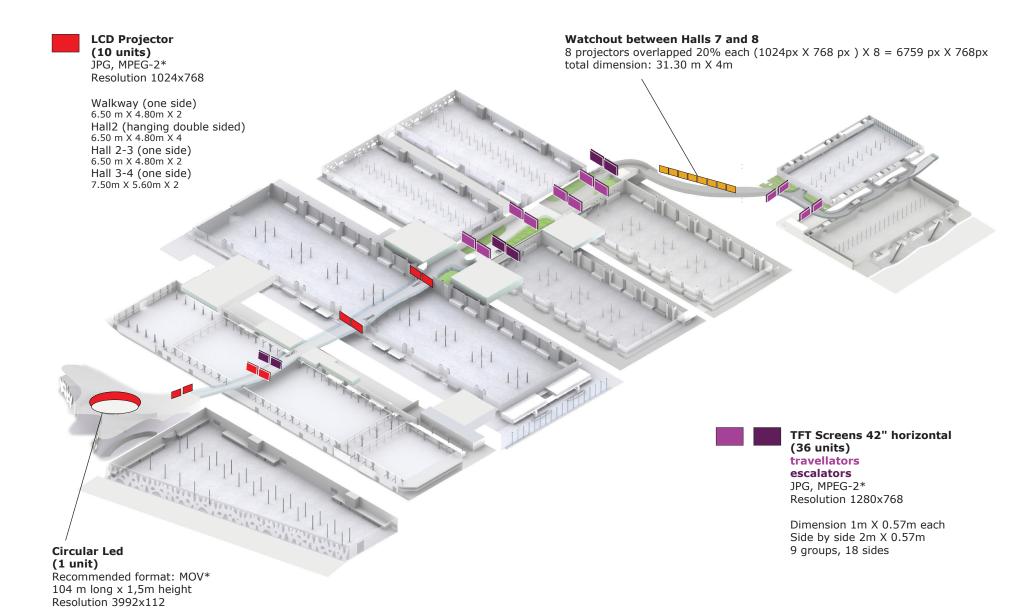




Information regarding 12 transport points (taxi, bus, train)
TAXI and train wait times and evolution
Integration with maps: route and time for arrival calculation

## **Digital Signage**





## **Digital Signage**











Circular Led (Total 1 unit) Recommended format: MOV\* (no sound available) Resolution 3992x112 104 m long x 1,5m height

... LCD Projector (10 units) JPG, MPEG-2\* Resolution 1024x768

Walkway (one side): 6.50 m X 4.80m X 2 Hall2 (hanging double sided): 6.50 m X 4.80m X 4 Hall 2-3 (one side): 6.50 m X 4.80m X 2 Hall 3-4 (one side): 7.50m X 5.60m X 2

..... TFT Screens 42" horizontal (36 units) JPG, MPEG-2\* Resolution 1280x768 Dimension 1m X 0.57m each Side by side 2m X 0.57m (9 groups, 18 sides)







Watchout between Halls 7 and 8 8 projectors overlapped 20% each (1024px X 768 px ) X 8 = 6759 px X 768px total dimension: 31.30 m X 4m

#### Moveable Elements\*\*

Totem 42" screen vertical (Total 18 units) Recommended format: JPG, MPEG-2\* Resolution 768x1280 Dimension 0.57m X 1m

Totem 57" screen horizontal (Total 2 units) Recommended format: JPG, MPEG-2\* Resolution 768x1360 Dimension 1.25m X 0.70m

\*If movies are delivered in their final format, please take into account that all the files must be to 30fps.

\*\* The totems are meant to be installed along the walkway and south access. Exact location of totems depends on availability of sockets and network connections in the area. Please contact our team to find a solution that suits you.