ITU Conference

ITU-BDT Regional Seminar on Fixed Mobile Convergence and New Network Architectures for the Arab Region

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Agenda

- MTC-Vodafone (Bahrain) in Brief
- Our Achievement
- MTC Group Direction
- 3G Network in the Kingdom of Bahrain
- Examples of 3G Services
- Defining Convergence
- Beyond 3G
- Our Commitment

MTC-Vodafone (Bahrain) in Brief

1. MTC-Vodafone (Bahrain) was awarded the second mobile license in Bahrain in April 2003.
   It was selected among 10 bidders for the license

2. Under the license obligation, MTC-Vodafone (Bahrain) was committed to deploy by the end of 2003:

   - Nation-wide GSM coverage that provides the **fastest possible mobile data services**
   - Introduction of rich set of mobile data services using **leading-edge technologies**

3. In addition to Mobile License, other licenses were granted such as International (Facilities and Services), VAS and ISP

Our Mission in the Kingdom

"We commit ourselves to provide the most reliable and cost-effective communication network in Kingdom of Bahrain that will help our customers to innovatively :

W I R E L E S S L Y

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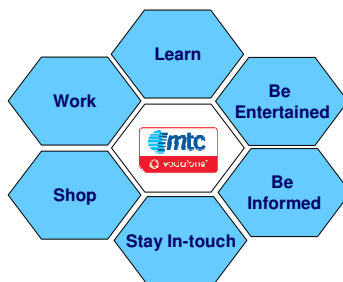
Our Strategy

Differentiation and Innovation via:

- Our People – Young, Creative, and Empowered
- Our Network – Latest Technology 2G, GPRS, EDGE & 3G
- Our IT Systems – Fully Integrated
- Our Portfolio of Data Service – WoW – Rich Mobile Data Content
- Our Products – Value for Money
- Our SIMs – User Friendly Menus
- Our Customer Service and POS – Experience Shops
- Our Distributors – Key Players
- Our Suppliers - Partners in Success

Our Achievement

- Successful Launch on the Target Date
- 1st Nationwide 3G Network in the Region
- 1st VPN solution for Corporations in the Region
- 1st TV Broadcast through the Mobile in the Region
- 1st CAMEL Roaming
- 1st Push email – Enterprise & personal editions
- Innovative Pricing, bundling, and comprehensive service offering on Postpaid and Pre-paid
- Excellent Customer Service and Unique Experience Shop Concept
- 100,000 Subscribers Before the end of 1st year from launch (16% market share)
- Portfolio of various and unique data services (WoW Portal)
- 82% Bahrainisation and above since launch
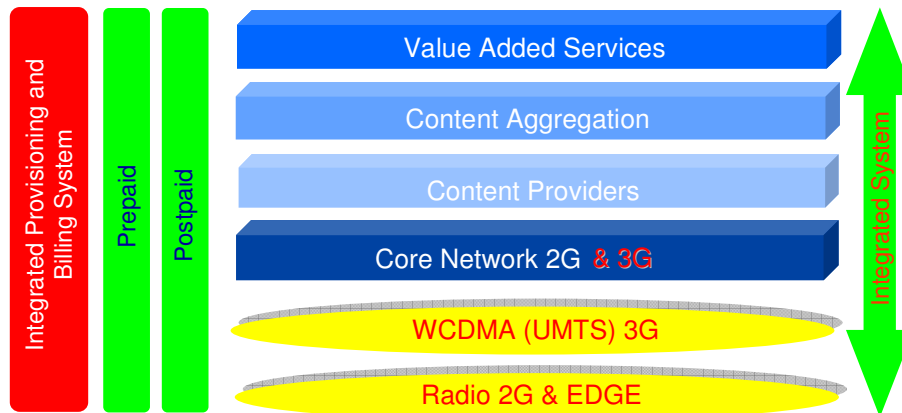
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MTC-Vodafone (Bahrain) Experience Shop

MTC Group Direction

MTC group is committed to the evolution of MTC-Vodafone (Bahrain) as the regional leader in technology and customer services.

The 3G deployment in Bahrain set the scene for the rest of MTC group of companies to deploy such state-of-the-art technologies in their respective territories.
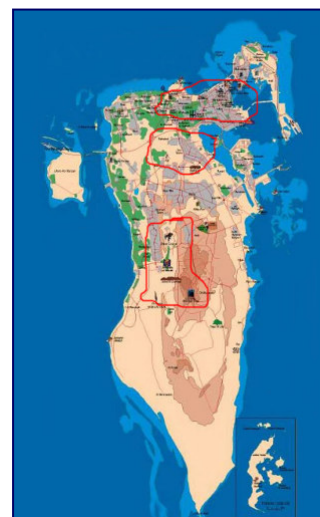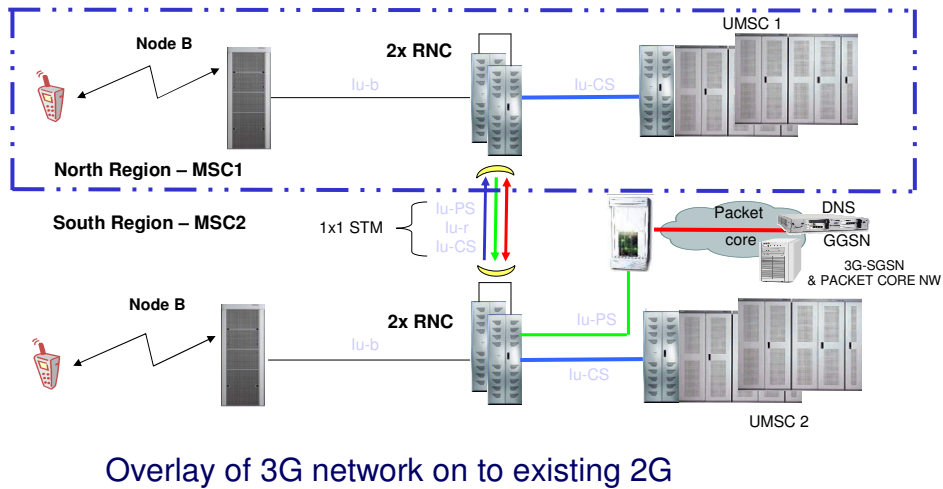
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Technology and Service Stack

mtc vodafone

Integrated Provisioning and Billing System | Prepaid | Postpaid

Value Added Services

Content Aggregation

Content Providers

Core Network 2G & 3G

WCDMA (UMTS) 3G

Radio 2G & EDGE

Integrated System

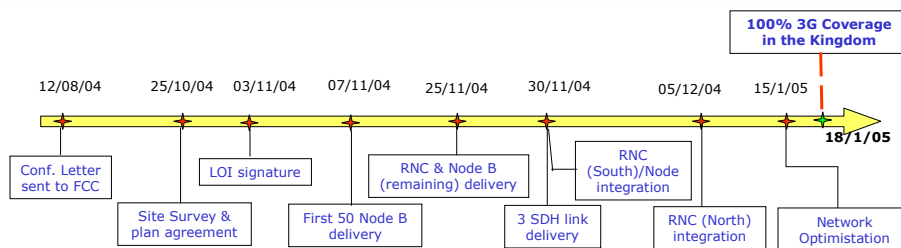# 3G Network Coverage in 2003

mtc vodafone

- **1st in Middle East to Launch 3G**
- **Focused 3G coverage:**

  - Manama (Diplomatic and Seef)

  - Bahrain University campus at Isa Town and Sakhir and vicinity

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MTC-Vodafone **Bahrain 3G**
NETWORK DIAGRAM

Node B

2x RNC

lu-b

lu-CS

UMSC 1

North Region – MSC1

South Region – MSC2

1x1 STM

lu-PS
lu-r
lu-CS

Packet core

DNS
GGSN

3G-SGSN
& PACKET CORE NW

Node B

2x RNC

lu-b

lu-PS

lu-CS

UMSC 2

Overlay of 3G network on to existing 2G

3G Nation-Wide Coverage Roll-Out

**100% 3G Coverage
in the Kingdom**

12/08/04   25/10/04   03/11/04   07/11/04   25/11/04   30/11/04   05/12/04   15/1/05

18/1/05

Conf. Letter
sent to FCC

LOI signature

RNC & Node B
(remaining) delivery

RNC
(South)/Node
integration

Site Survey &
plan agreement

First 50 Node B
delivery

3 SDH link
delivery

RNC (North)
integration

Network
Optimistation

Network Highlights:

❧ Followed WCDMA UMTS (3GPP release 99)
❧ Utilized 5 MHz of Core UMTS frequency band (2 GHz)
❧ Utilized 100% owned backbone IP network

3G Network Nation-Wide Coverage in Jan, 2005

- **MTC-Vodafone (Bahrain) is one of the 1st (if not the only operator in the World) to have full 3G nation-wide coverage.**

- **Hawar Islands, King Fahad Causeway and Rural areas provided with 3G coverage as well.**

- **Successfully tested international video calls with operator who have implemented 3G technologies**

3G Offering

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Video Call Feature

- **Considered impossible before, video calling using mobile phones is a reality now, thanks to cutting edge 3G technology!**
- **Makes communication to our dear ones special and fun because you can see people, show objects, surroundings and activities in real time as you talk!**
- **What is required:**
  - Video call capable 3G mobile phone
  - 3G mobile network → MTC-Vodafone (Bahrain)!

Video Call Ad

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Driving Video Calling

A new application that uses
Presence to drive video calling

In the know.

While making a voice call, an SMS will be sent
to A-Party prompting them if they want to make
a video call instead!

GPRS/3G Data Connect Cards

➢ Customized PC connect card
➢ Provide seamless mobility internet at 384Kbps speed every where in Bahrain
➢ GPRS Roaming in 29 mobile operations around the world
➢ Able to Roam in Japan

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Connect Card Ad

3G Connect Card Application

Live Coverage Application
Bahrain World Trade Center

Internet

3G/Wi-Fi Access

Littlebox provides multiple users with 3G wireless broadband connectivity and provides local networking
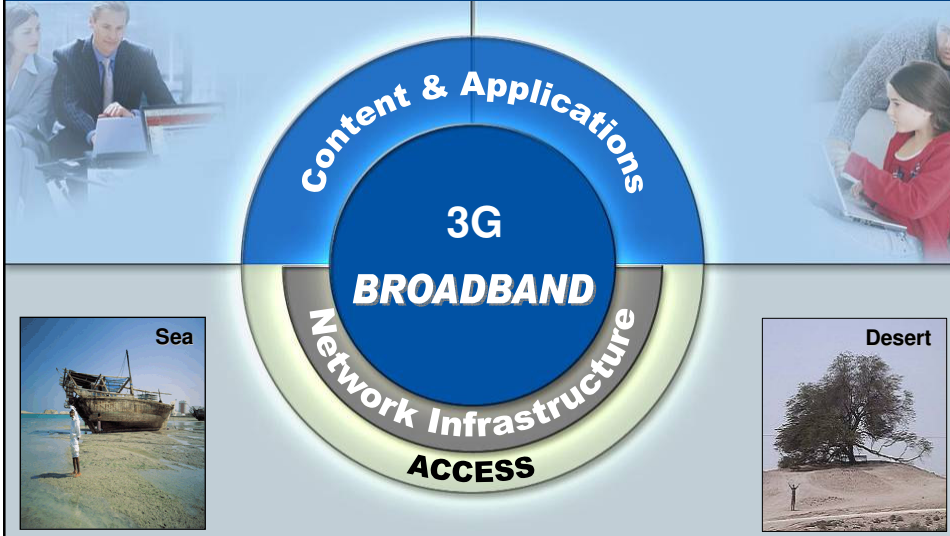
Wi-Fi

3G Network

Features:

❧ **Private local network for groups of users, allowing internet connection, use of corporate tools and file sharing**

❧ **Personal office access: e-Mail, Internet. Business application**

❧ **High bandwidth connectivity anywhere**

Streaming over 3G

WWW.MPGDVD.COM

❧ First in the Middle East
❧ One of the few world-wide
❧ Using Special Codec
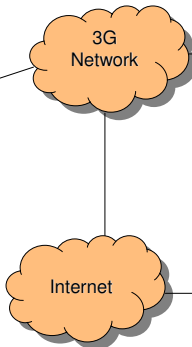❧ Downloads of MPEG 4-like video
❧ Downloads of MP3-like audio

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3G Coverage as
Broadband Wireless Access for Rural Areas

Content & Applications

3G
BROADBAND

Network Infrastructure

ACCESS

Sea

Desert

IMF / ITU / Nov 2005

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Video Mail

"Salam Alaikum, everybody.
This is me in Dubai! Save this
video till I return home."

3G
Network

Internet

At office:
review voice
and video
mail from
handset…

"Hey, Our
boss is in
Dubai!"

Back Home: review voice and video mail from PC…
"Hey, guys… Dad has sent us a video from Dubai!"

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Video Portal

Participants
The Marratech Work Environment has room for everyone. The Participants area gives you an overview of who is currently present

Voice over IP
To talk to your group, simply press the microphone button. Low delay, crystal clear Voice over IP provided by Global IP Sound.

"Hello, sweetheart! Meet me at Costa at 9:00!"

Whiteboard
The Whiteboard area is where all users can interact by sharing applications, MS Office documents, images and drawings.

Pointers, markers, live camera snapshots and other tools are available to help you share your ideas.

Chat
Send a small message or a web link to everyone or to only one person.

Video
If desired, video can be used within your environment, enabling you to meet others with high quality video.

Push-To See

**Walkie Talkie-like conversation
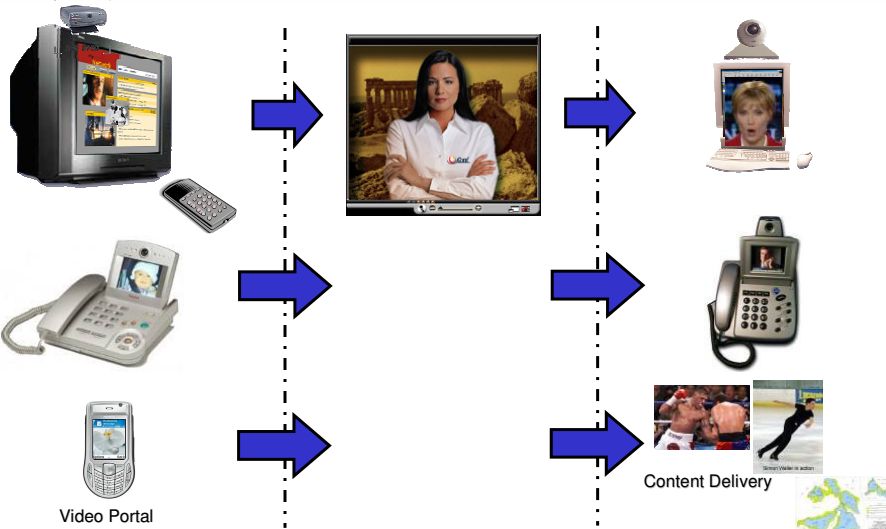1 to 1 / 1 to Many**

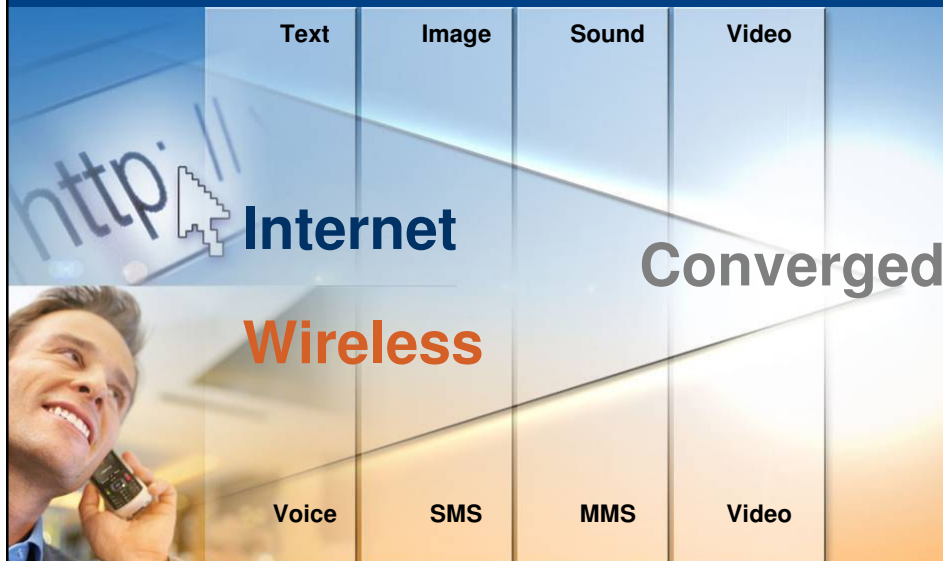**Voice communication: Push-To-Talk
Video communication: Push-To-See**

**GPRS, EDGE
WCDMA, IP**

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Video Telephony Convergence

Video Portal

Content Delivery

Defining Convergence

| Text | Image | Sound | Video |

Internet

Converged

Wireless

| Voice | SMS | MMS | Video |

Beyond 3G ………..

Degree of mobility

Driving
Walking
Standing

UMTS
CDMA
GSM GPRS
EDGE
DECT
BlueTooth
EV-DO EV-DV
FlashOFDM (802.20)
WLAN (IEEE 802.11x)
HSDPA
Systems beyond 3G >2010
IEEE 802.16e
wimax
IEEE 802.16a,d

User data rate

0.1   1   10   100   Mbps
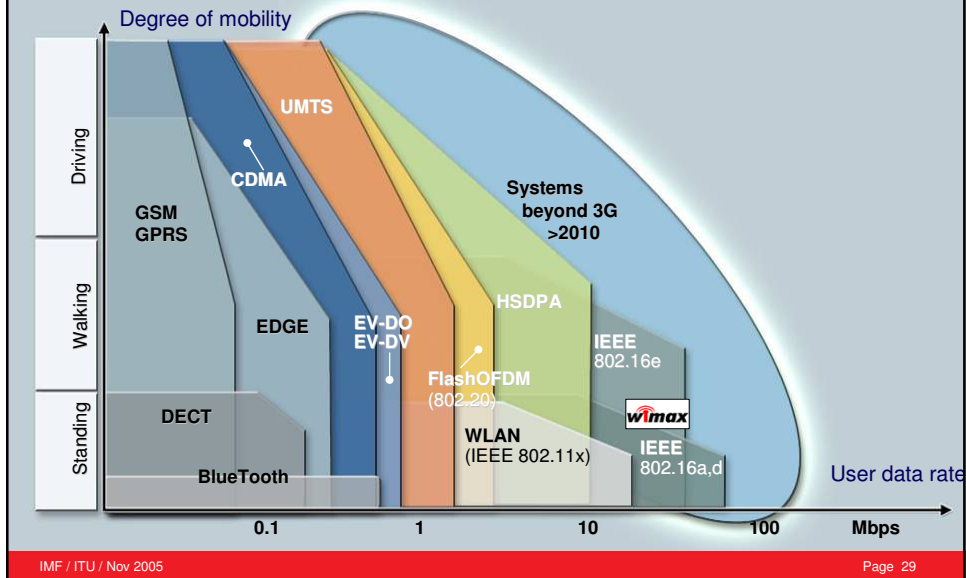
MTC-Vodafone (Bahrain) COMMITMENT

- We have provided people with quality data and voice any where, any time at an affordable price
- We converged:
    - Voice
    - Information service
    - Games/entertainment
    - Internet service
    - TV
    - Video

    AND More ......

- We have converted customer's mobile set from a simple device to a lifestyle tool for business and entertainment

We hear you

Thank You

www.mtc-vodafone.com.bh

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