



Hot Spot and User Manager

*An easy approach to Internet
access in tourist places*

Andrea Grittini
Product Manager
Wireless Division
Wi4Net - Totalconn

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Andrea Grittini

- Graduated in Computer Science
- Working with wireless since 2003
- Startup of one of the first Italian WISP
- Mikrotik distributor since 2005
- Microsoft MCP
- Mikrotik Certified in Routing and Wireless
- Mikrotik Certified Trainer

Wi4Net - Totalconn

- Mikrotik Italian distributor
- Training and consulting
- Building Certified Devices for EU market
- Power supply solutions
- Ecommerce Web site www.wi4net.eu or .it



The screenshot shows the Wi4Net website interface. At the top, there is a navigation menu with links for Home, Store, Training, Company Informations, News, Terms of service, Contacts, Solutions, and Download. Below the menu, the main content area features a central banner for the MUM (Mobile World Congress) in the Czech Republic, announcing that Totalconn - Wi4Net will be present with a product desk. To the left, there is a 'PRODUCT CATEGORIES' list including Boards, Mini Pci, Cases, CPE LOW-COST, Power Supply, POE, RF Pigtailed & cables, Accessories, Antennas, Base Station Products, Bridge Products, CPE Products, Access Point Router Indoor, Wifi UMTS Router, and Sw Products. Below this list is a 'DOWNLOAD DATASHEET' link. On the right side, there is a login section with 'Username' and 'password' fields, and a 'SEARCH' box at the bottom right. The website also displays logos for Totalconn and Mikrotik, along with text indicating that Wi4Net is a Mikrotik Authorized Training Center.

Totalconn

- Base Station solution:
- Point-to-Point integrated antennas
- CPEs



HotSpot and UserMan

Topics

- What are Hotspots?
- Where installed
- Hotspot Quick setup
- User Manager: an easy way to manage centralized access
- Logging and accounting
- SMS approach
- Conclusion

Hotspot

- It is RouterOs tool for Instant Plug-and-Play Internet Access
- HotSpot provides authentication of clients before access to public network
- It also provides User Accounting
- It is very EASY to setup

Hotspot: Where

- Hotel, restaurant, café
- Shopping Mall,
- Public Park and areas,
- Camping, Beach
- Marinas
- Hospital
- Municipal Hotspot
... where you want



Hotspot: When

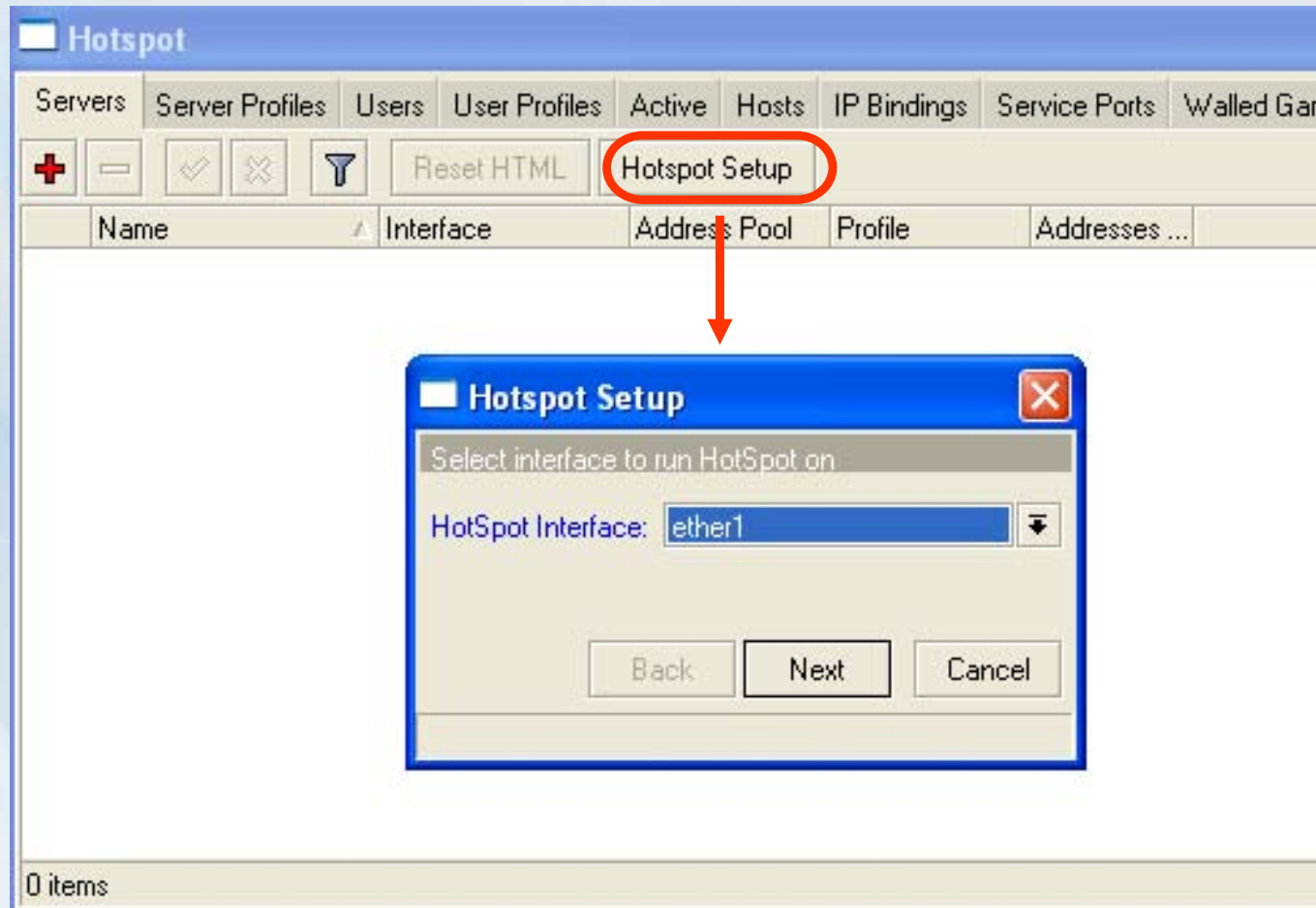
- During meeting in conference room
- In the summer at the beach
- In the winter in ski places
- At the week-end in parks and open spaces

...not all the places need connectivity for all the year round

Hotspot Setup

- Easy wizard tool
- It is similar to DHCP server setup
- Just select the interface and answer to questions

Hotspot: setup wizard



Hotspot: functionality

Hotspot

Users User Profiles Active Hosts IP Bindings Service Ports Walled Garden Walled Garden IP List Cookies ...

Find

	MAC Address	Address	To Address	Server	Idle Time	Rx Rate	Tx Rate
H	00:17:F2:35:02:CE	192.168.100.96	192.168.100.96	hotspot1	00:00:03	1198 bps	1401 bps

Hotspot

Users User Profiles Active Hosts IP Bindings Service Ports

Find

Server	User	Domain	Address
hotspot1	admin		192.168.100.96

1 item

Hotspot

Server Profiles Users User Profiles Active Hosts IP Bindings Service Ports Walled Garden Walled Garden IP List ...

Reset All Counters Find

Server	Name	Address	MAC Address	Profile	Uptime
all	admin			default	00:00:00

1 item

disabled

New Hotspot User

General Limits Statistics

Server: all

Name: user1

Password:

Address:

MAC Address:

Profile: default

Routes:

Email:

OK

Cancel

Apply

Disable

Comment

Copy

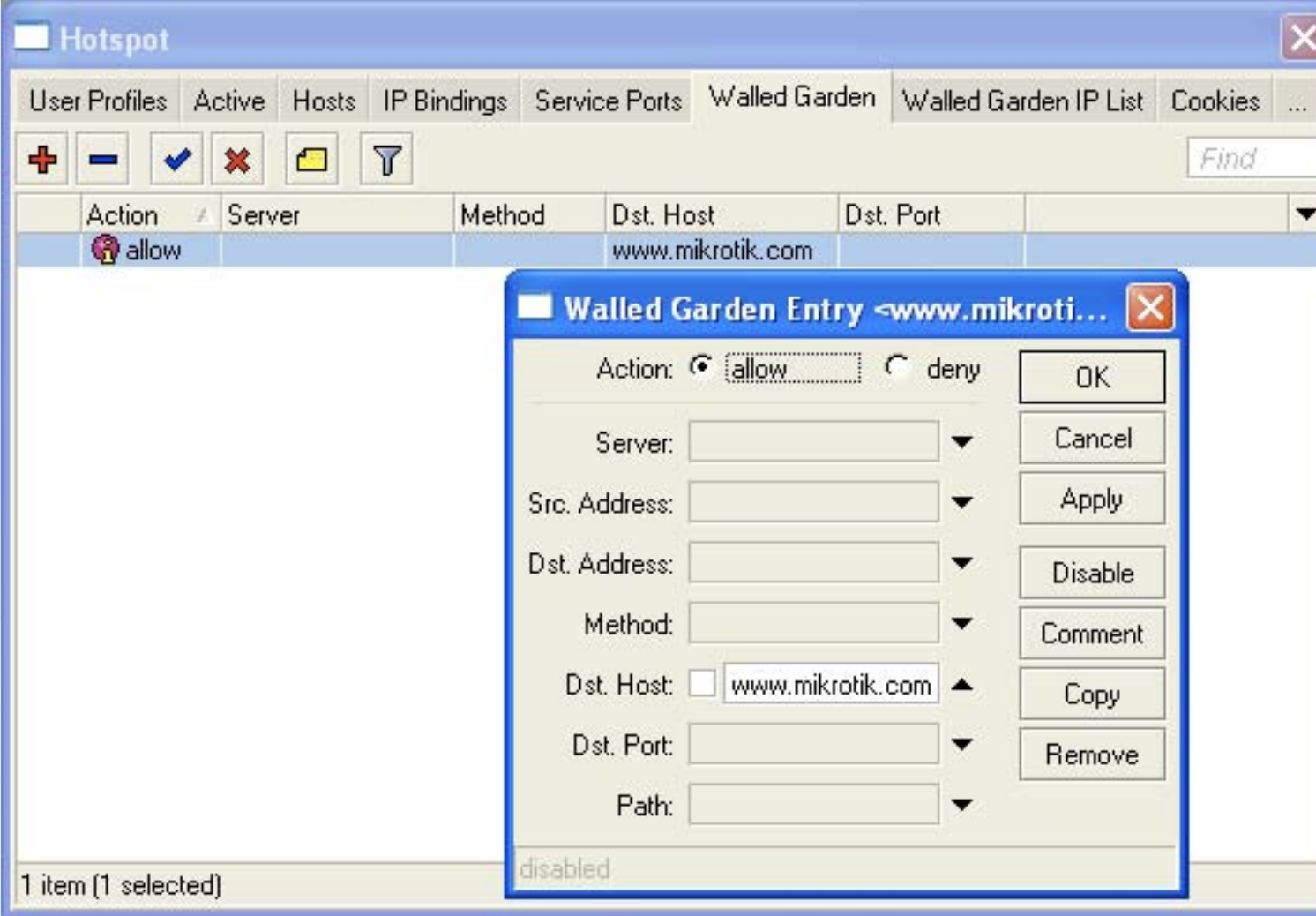
Remove

Reset All Counters

Hotspot Walled Garden

- Tool to get access to specific resources without HotSpot authorization
- Can be used for Advertising web site
- For Online payment website

Walled garden



The screenshot shows the Mikrotik WinBox interface for configuring Walled Gardens. The main window is titled "Hotspot" and has several tabs: "User Profiles", "Active", "Hosts", "IP Bindings", "Service Ports", "Walled Garden", "Walled Garden IP List", and "Cookies". The "Walled Garden" tab is active, showing a table with one entry:

Action	Server	Method	Dst. Host	Dst. Port
allow			www.mikrotik.com	

A dialog box titled "Walled Garden Entry <www.mikroti..." is open over the table. It contains the following fields and controls:

- Action: allow deny
- Server: [Dropdown menu]
- Src. Address: [Text field]
- Dst. Address: [Text field]
- Method: [Text field]
- Dst. Host: www.mikrotik.com
- Dst. Port: [Text field]
- Path: [Text field]

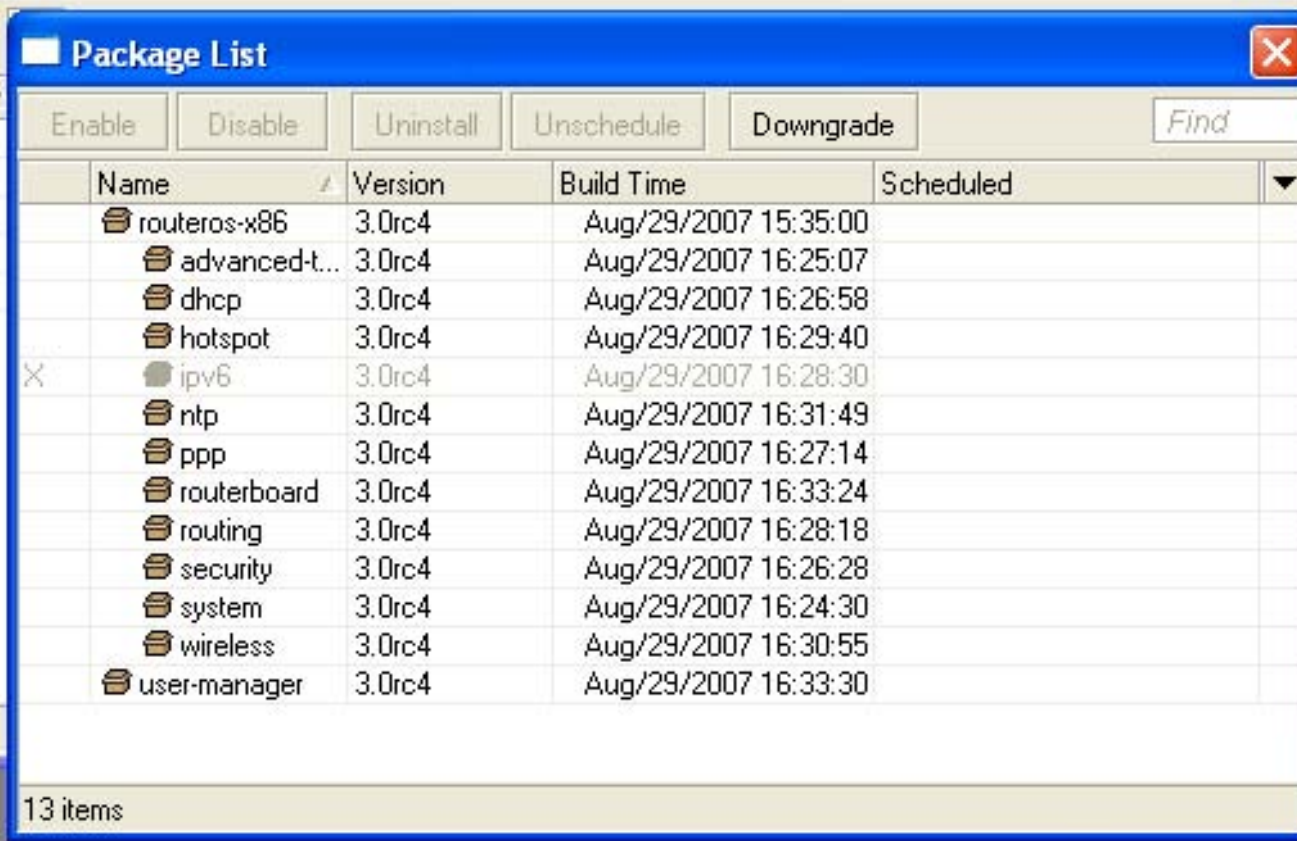
Buttons on the right side of the dialog include: OK, Cancel, Apply, Disable, Comment, Copy, and Remove. At the bottom of the dialog, it says "disabled".

User Manager

- User Manager is a **Radius** server for processing authentication and for accounting
- Installable as a RouterOs package
- A new version to be released soon

User Manager

- Package



The screenshot shows a window titled "Package List" with a table of installed packages. The table has columns for Name, Version, Build Time, and Scheduled. The packages listed include routeros-x86, advanced-t..., dhcp, hotspot, ipv6, ntp, ppp, routerboard, routing, security, system, wireless, and user-manager. The status bar at the bottom indicates "13 items".

Name	Version	Build Time	Scheduled
routeros-x86	3.0rc4	Aug/29/2007 15:35:00	
advanced-t...	3.0rc4	Aug/29/2007 16:25:07	
dhcp	3.0rc4	Aug/29/2007 16:26:58	
hotspot	3.0rc4	Aug/29/2007 16:29:40	
ipv6	3.0rc4	Aug/29/2007 16:28:30	
ntp	3.0rc4	Aug/29/2007 16:31:49	
ppp	3.0rc4	Aug/29/2007 16:27:14	
routerboard	3.0rc4	Aug/29/2007 16:33:24	
routing	3.0rc4	Aug/29/2007 16:28:18	
security	3.0rc4	Aug/29/2007 16:26:28	
system	3.0rc4	Aug/29/2007 16:24:30	
wireless	3.0rc4	Aug/29/2007 16:30:55	
user-manager	3.0rc4	Aug/29/2007 16:33:30	

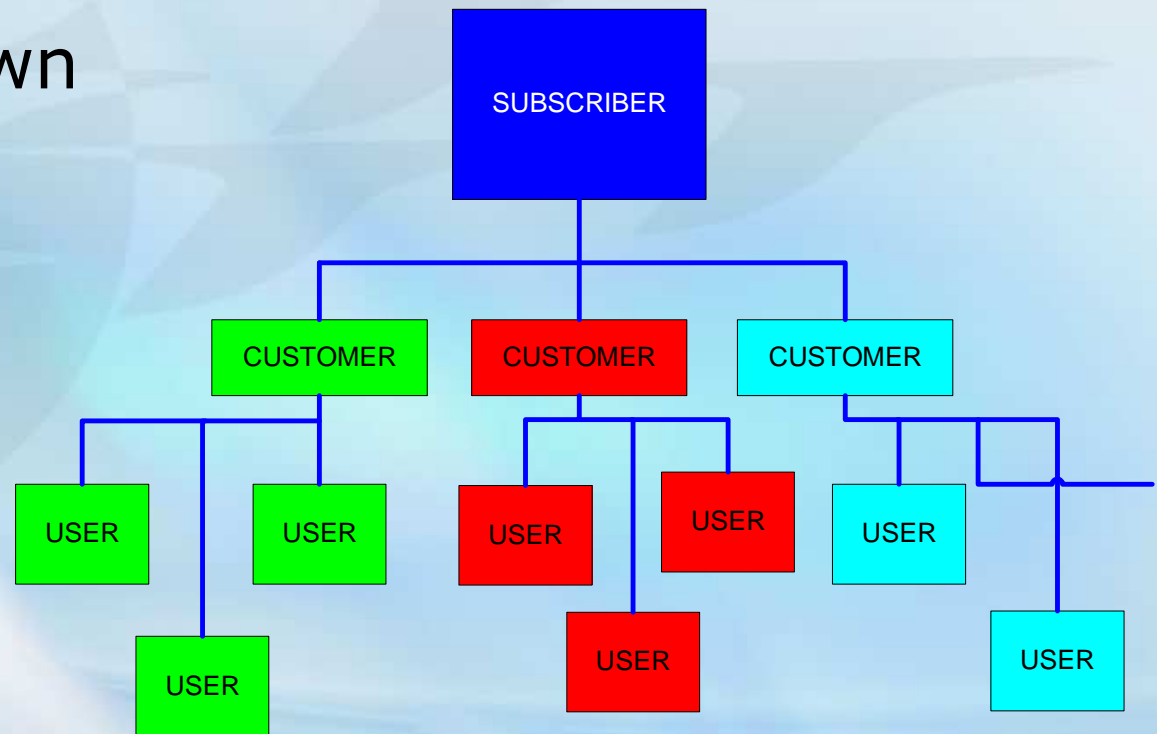
User Manager: Scalability

- Together in the same gateway machine
- In a separate authentication server
(to be connected to the hotspot via radius client)

UserMan: multi-site

- One UserMan installation can control several gateway site
- Local customer can administer their own users

Color=different site



Logging and accounting

- Due to anti-terrorism regulations, many countries now require the WISP or Internet Point to keep information about:
 - Who is connected
 - When they connect to the system
 - Which website users have visited
- User must provide Identity Card or other legal infos to get access to an Hotspot

Logging and accounting

- User Manager supplies logging and accounting informations for the connected users:
 - When they were connected
 - How many time have used
 - How many bandwidth
- RouterOS through Firewall or Proxy provides information about websites accessed

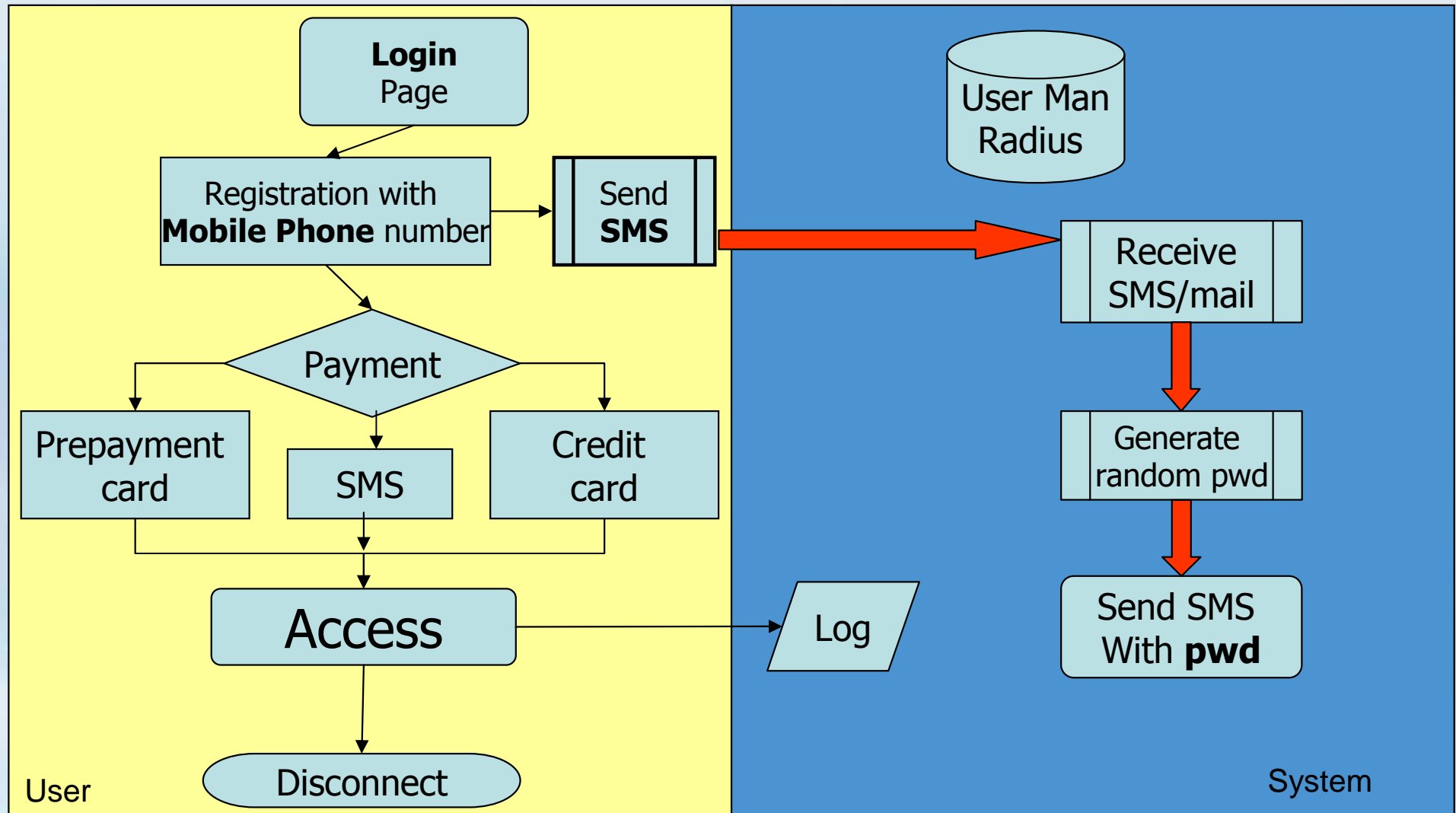
ROUTER OS IS COMPLIANT TO ALL OF THE REGULATORY RULES !

User Manager: easy approach

- Mobile phone is used by 110% of people
- SMS is an easy tool to get information about users
- SIM infos are validated by mobile operators before customer gains access to telephone line



Easy approach



Wi4Mobile

- It is a small device that does all these things:
 - Wifi 802.11abg access point
 - GSM/GPRS UMTS/HSDPA modem
 - Hotspot
 - Usermanager
 - Send SMS
 - Provide backup line
 - RouterOs inside



Conclusion

- Hotspot and UserManager are powerful tools to quickly setup an Internet Access infrastructure
- With some tools it will be compliant to all local regulations
- SMS can help to deploy an unattended HotSpot access



Thanks for your attention !

Visit our stand Wi4Net – Totalconn

www.wi4net.eu

Info@wi4net.it

Andrea.Grittini@wi4net.it