


Recent market research (In-Stat)

- Key findings of an In-Stat consumer survey:
 - According to an In-Stat consumer survey, people are **increasingly** using hotspots for personal reasons.
 - Survey respondents are showing an **increased reluctance** to pay for hotspot access. Nearly 50% of respondents said they would only use a free hotspot.
 - Access revenues will start to **decline** due to increased competition and users' reluctance to pay.
- Because of this trend, hotspot operators are turning to other methods to generate revenues. Operators have started bundling hotspot access with other services, such as fixed and mobile broadband. This way, consumers can access hotspots without paying a separate fee, and operators can generate some access revenue by bundling the cost of the service into a bigger service package that consumers are willing to purchase.

For-pay access



AT&T Account Login:

Username

Service Provider

-- Choose provider --


▼

Password

☐ I agree to AT&T [Terms and Conditions](#)

Log in ▶

[Forgot Password?](#)



Welcome to Riverside, CA

Get Connected Now

with AT&T Metro Wi-Fi

Choose the options that best suits your Wi-Fi needs.

Select Option:

One Day Pass - \$7.99

▼

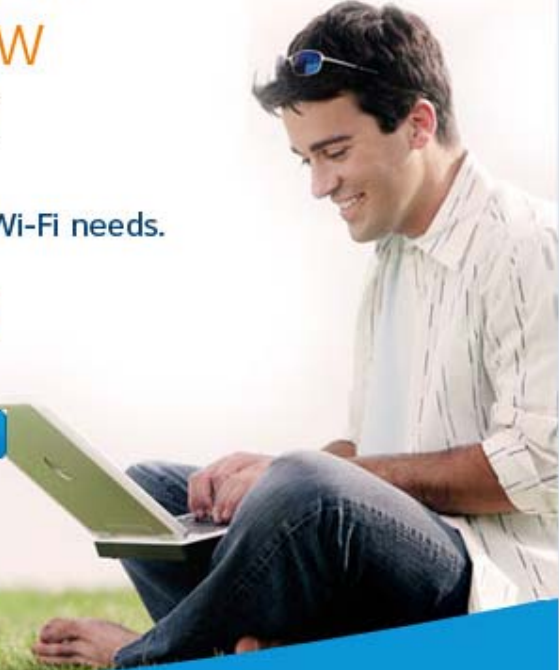
Order Now

Enter coupon code to get connected.

-


Connect

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YELLOWPAGES.COM™



Subscriber logins & RADIUS Roaming



AT&T Account Login:

☐ I agree to AT&T

Service Provider

-- Choose provider --

-- Choose provider --

AT&T metro wifi user

AT&T WiFi

AT&T Remote Access

@att.net

@attmobility.com

@attmobile.com

@bellsouth.net

@ameritech.net

@flash.net

@nvgbell.net

@pacbell.net

@prodigy.net

@sbcglobal.net

@snet.net

@swbell.net

@wans.net

Alltel

iPass

Boingo

Password

Log in

Wi-Fi CERTIFIED™
makes it Wi-Fi



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-

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Give potential new subs a „taster“

AT&T

AT&T Account Login: Username Password

☐ I agree to AT&T [Terms and Conditions](#) [Log in](#) [Forgot Password?](#)

Give us 2 minutes and we'll improve your Wi-Fi experience

Take our quick survey and you could win an iPod Touch

Brought to you by JiWire

Welcome to Riverside, CA
Get Connected Now
with AT&T Metro Wi-Fi

[Create Free Account](#)

☐ I agree to the AT&T [Terms and Conditions](#)


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CITY OF RIVERSIDE

SMART RIVERSIDE

Free access enabled, but restricted !



[atf.com](#) | [AT&T Customer Support](#) | [Contact AT&T](#)


AT&T Metro Wi-Fi

Portal

Welcome to AT&T Metro Wi-Fi Service

You are now connected to the internet

If you need a faster connection, want to use a VPN or have an online experience with less advertising, please reset your SSID to ATTMETROWIFI and refresh your browser to view available for-free service options.



No VPN pass-through

Must watch advertising

Lower bandwidth

Limited time-period

YELLOWPAGES.COM


FIND: Business Name or Category

LOCATION: City & State or ZIP

FIND

Explore Riverside California:

City of Riverside	Greater Riverside Chamber of Commerce
Smart Riverside	County of Riverside
Riverside Arts Council	Riverside Visitors Bureau



CITY OF RIVERSIDE

Hotspots in Germany

T-City Friedrichshafen
Ein Projekt von
Deutsche Telekom und Stadt Friedrichshafen

Sommer in T-City.
Kostenlos am HotSpot surfen!

HotSpot Sommer
vom 10.07. bis
12.09.2008
nur in T-City
Friedrichshafen!

Erleben, was verbindet. **T-Mobile**

- Actively used as a marketing tool to sell premium DSL packages & increase subscriber loyalty
- Mainly standalone hotspots
- First city network will go on trial in T-City, a showcase from DT about the future of wireless communications

T-Com decides to integrate outdoor ADSL-WiFi-Router into outdoor public payphones (alternative to lampposts)

Telestation

- Put outdoor ADSL router into public „telestation“
- ADSL automatically available
- Now users can get WiFi access
- Advertising can be „pushed“ to screen



Outdoor Router



Conclusion – Still early days, but WiFi has its place !



- USA: ATT survey proved: cellular subs with WiFi included in their plan are more loyal than subs who don't.



- Germany: T-Com is heavily marketing their WiFi hotspots to encourage sign-up for premium DSL+Voice packages.



- Belgium: Telenet's core business is (Voice+Data+TV) over cable, but have been marketing their 1300 hotspots since 2003, to increase subscriber loyalty.



BACKUP ONLY

Advertising-financed (limited time for-free) City-wide WiFi

- Advertising can be used to subsidize free low-bandwidth WiFi access. „Free“ means what Operator wants it to mean e.g. „Free account for 10 hours of access“
- Ads before and after authentication.
- At regular intervals, user must watch ads while browsing the web as *quid pro quo* for „free“ access.
- **Opportunities:**
 - Help users get familiar with using WiFi
 - Earn advertising revenue (€€/thousand page impressions)
 - Entice „free users“ to sign up as paying subscribers
 - Offer secure WiFi services to city, police/fire/ambulance, public transport operators

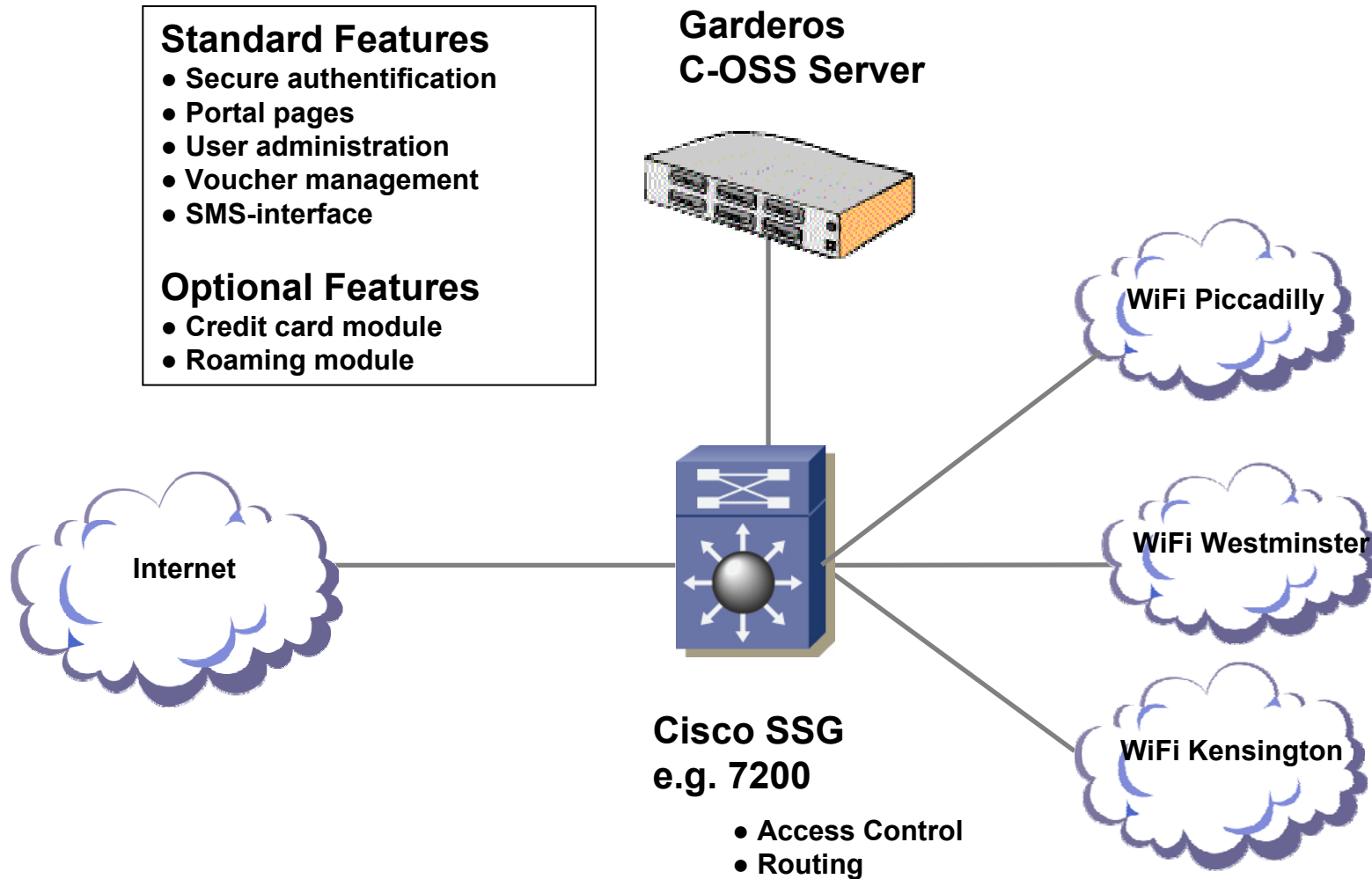


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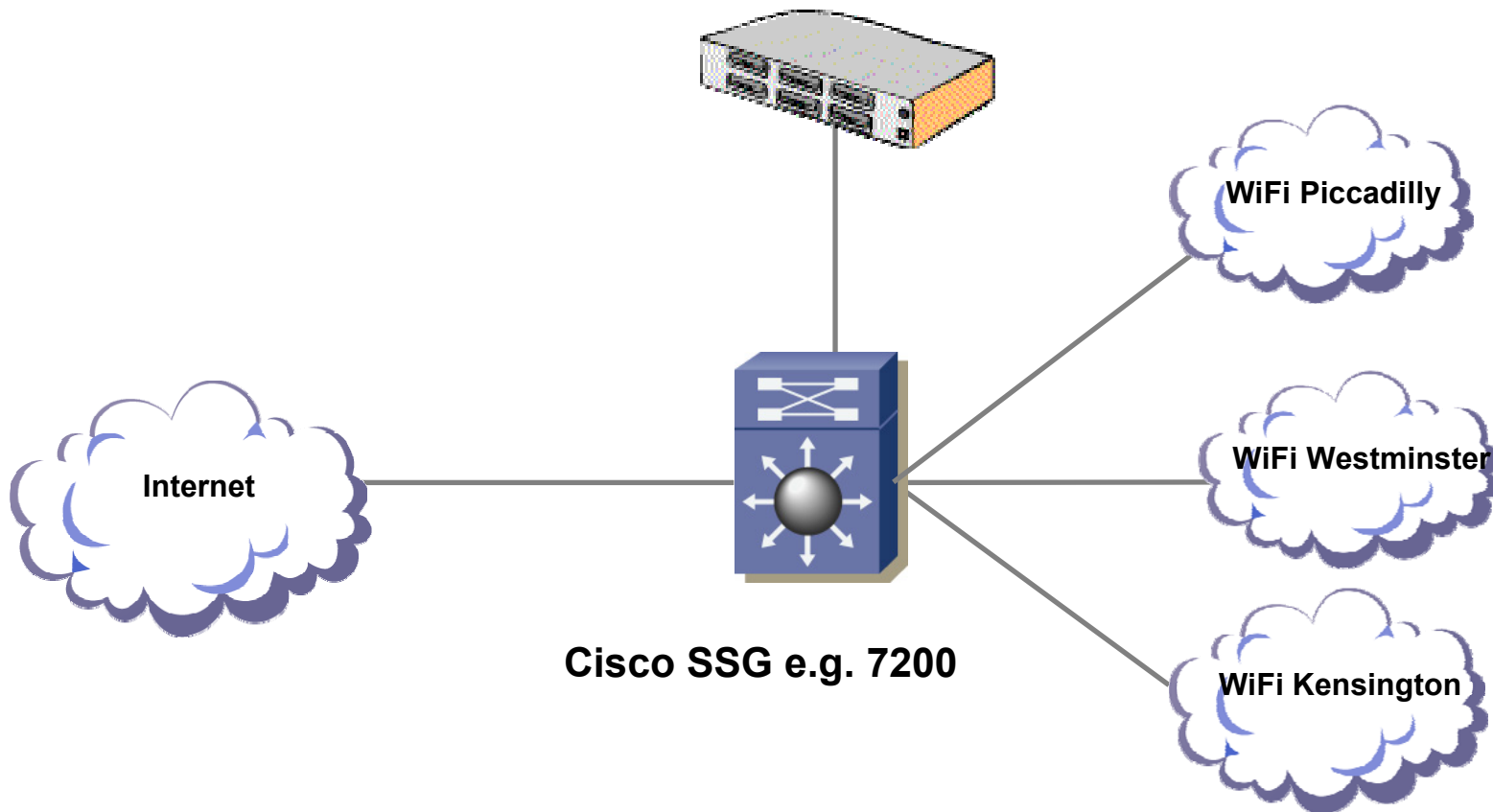


Centralised system for WiFi access control



Engineering Capacity Rules

**C-OSS scales to max. 4000
concurrent users (CCU)**



Some key technical learnings from Muni-WiFi projects

■ **Technical**

- Access Control System reaches TCP/IP session overload and fails. Complete network is down !
 - Solution: Limit TCP/IP sessions per user.
- How to integrate Access Control Platform with Advertising Transparent Proxy, to implement ad-financed WiFi

■ **Business**

- Information about user behaviour (typical log-in duration, frequency of use)
- Empirical values about number and types of vouchers purchased by users
- Cellular (U.S.) and DSL (EU) subscribers who have WiFi in their plans are less likely to switch providers.