

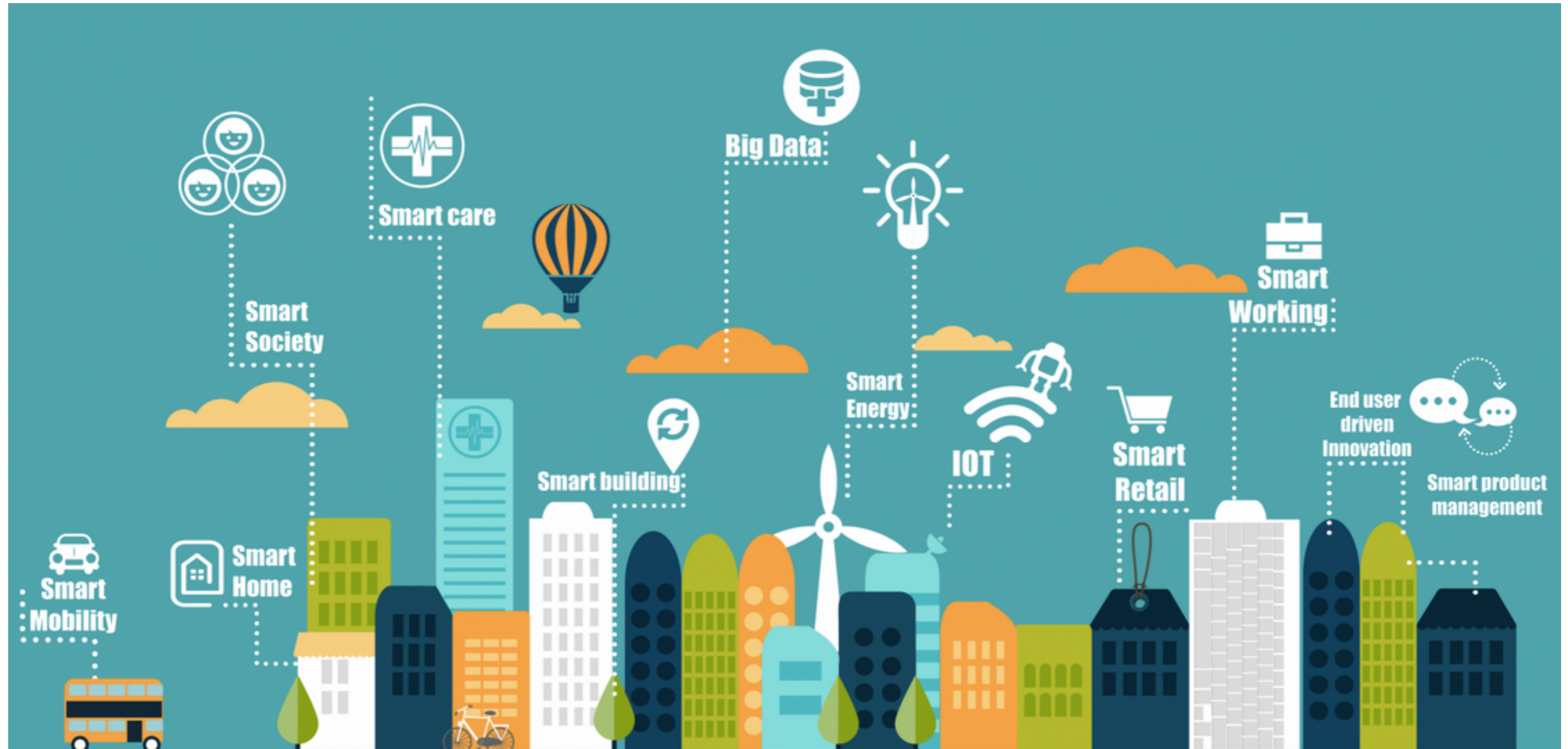


**RIPE NCC**  
RIPE NETWORK COORDINATION CENTRE

# IP, Internet of Things & the Lebanese case

5th November 2015 | IPv6 Coordination meeting, Beirut

# Internet of Things... Reality or Marketing stunt?





# Internet of Things...

## Reality or Marketing stunt?

- Cisco forecasts 24 billion Internet connected objects by 2019.
- Morgan Stanley forecasts 75 billion networked devices by 2020.
- Huawei forecasts 100 billion IoT connections by 2025.
- McKinsey Global Institute projects that the financial impact of IoT on the global economy may be as much as \$2.7 to \$6.2 trillion by 2025.

# Internet of Things



The term "Internet of Things" (IoT) denotes a trend where a large number of embedded devices employ communication services offered by the Internet protocols. Many of these devices, often called "smart objects" are not directly operated by humans, but exist as components in buildings or vehicles, or are spread out in the environment.

- RFC 7452 "Architectural Considerations in Smart Object Networking"

# Internet of Things



RFC 7452 outlines a framework of four common communication models used by IoT devices in use today.

- Device-to-Device Communications
- Device-to-Cloud Communications
- Device-to-Gateway Model
- Back-End Data-Sharing Model

# Smart Cities



## Shaikh Mohammad announces Smart City project to transform Dubai

Project to link city administration, public safety, education and health care sectors



Image Credit: Gulf News

### Open data steps Dubai towards smart city goal

Keith Miller | 27 Oct 2015 | 0 Comments



### INFRASTRUCTURAL DEVELOPMENT - SMART CITIES

### Mohammed bin Rashid Smart Council launched

posted on 25/10/2015

His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the United Arab Emirates and Ruler of Dubai has launched "Mohammed Bin Rashid Smart Majlis", the largest smart and integrated platform in Dubai connecting 30 entities that will receive suggestions, comments, and ideas on which brainstorming sessions will be conducted. The Smart Majlis will operate under His Highness Sheikh Mohammed's direct supervision. Sheikh Mohammed bin Rashid Al Maktoum said: "Our doors are and will remain open, communication channels are open, and today we add a new channel, and a new Majlis to combine different Government entities to receive ideas, suggestions and comments. Our



# Bottom line



New technologies like:

- Internet of Things,
- Smart City initiatives,
- Long Term Evolution (LTE) & beyond,
- M2M
- .....

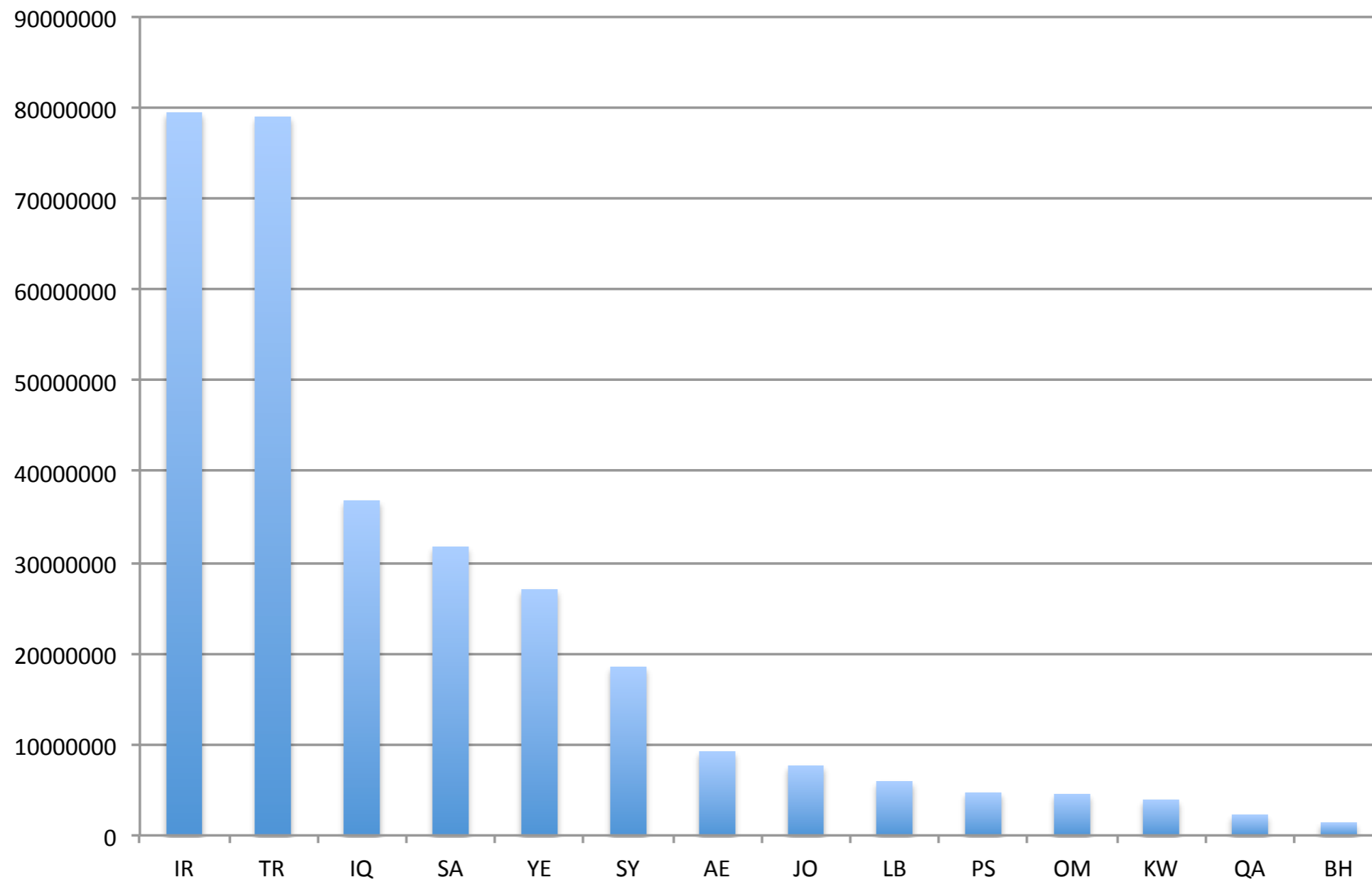
All these always-on technologies require a **HUGE** amount of IP address space.

# Situation in the Middle East

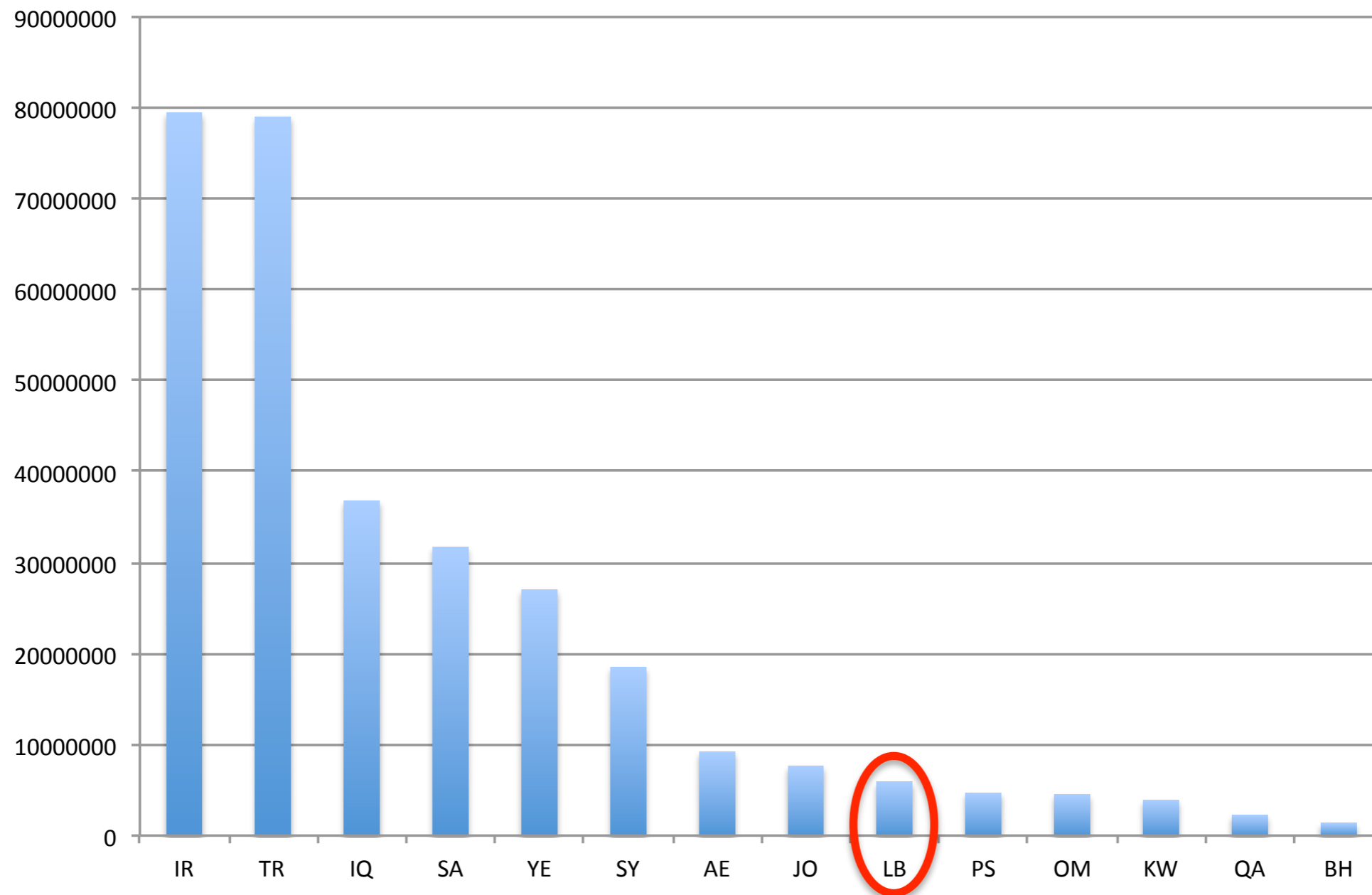




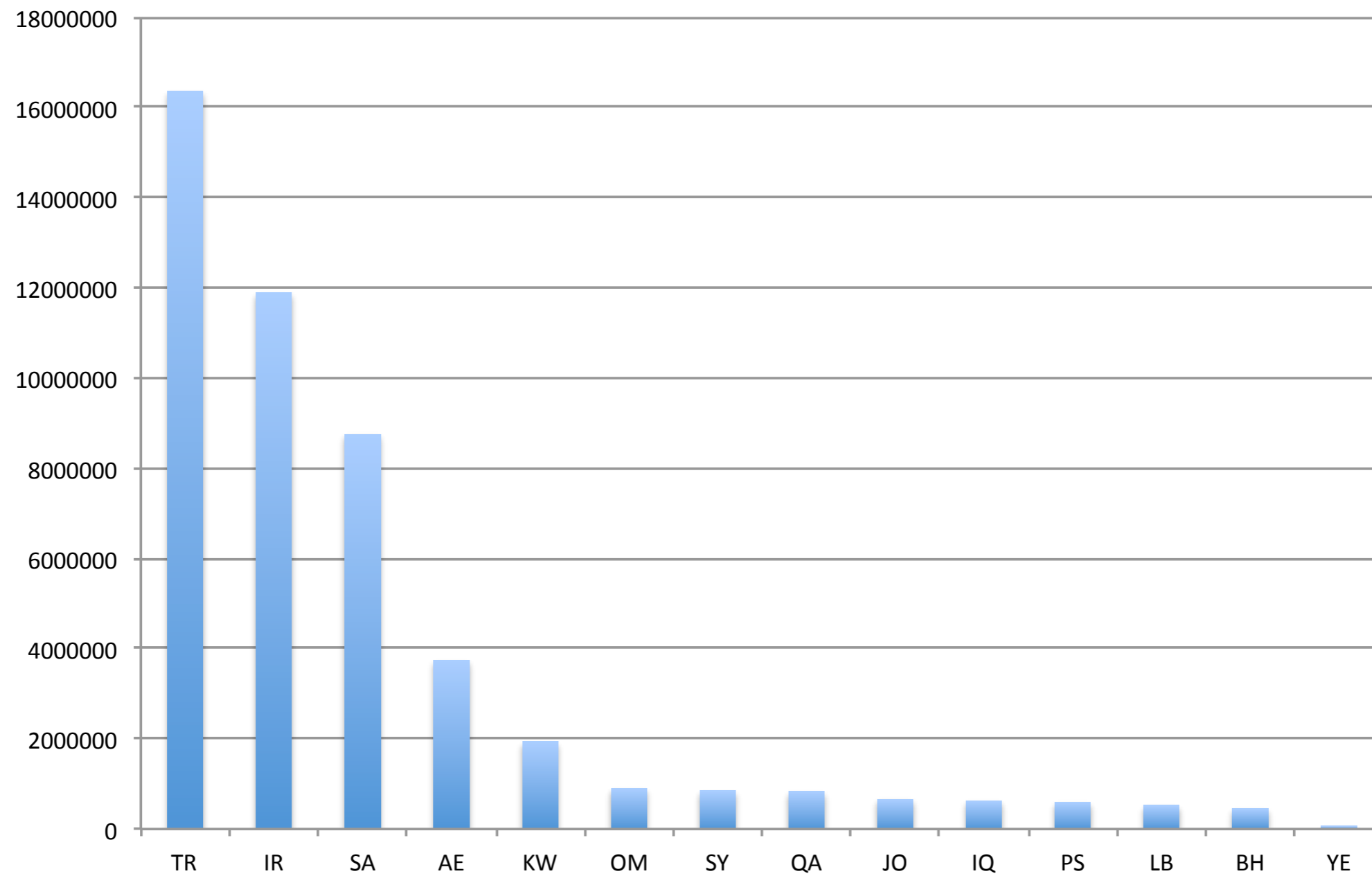
# Country Ranking by Population



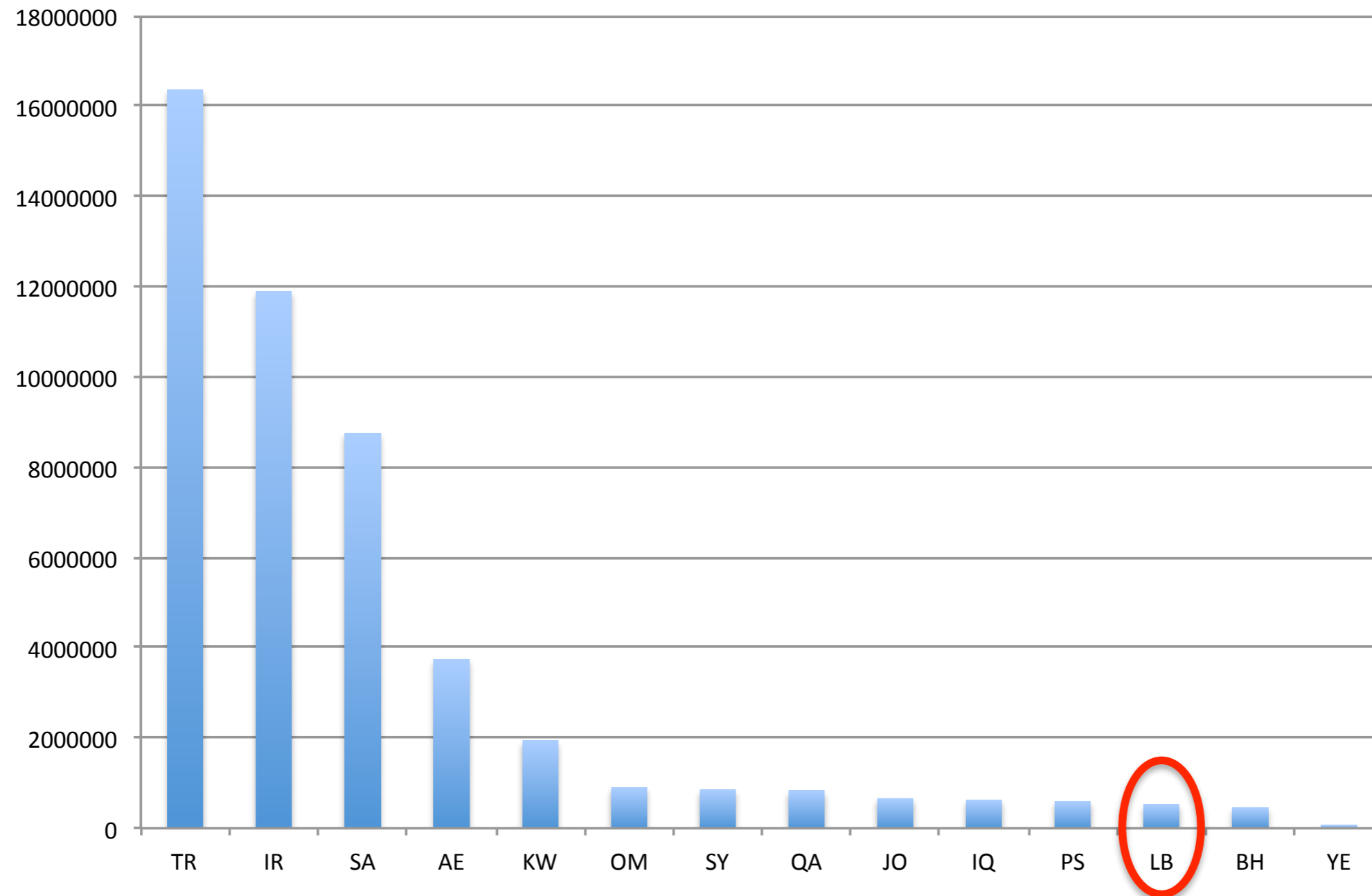
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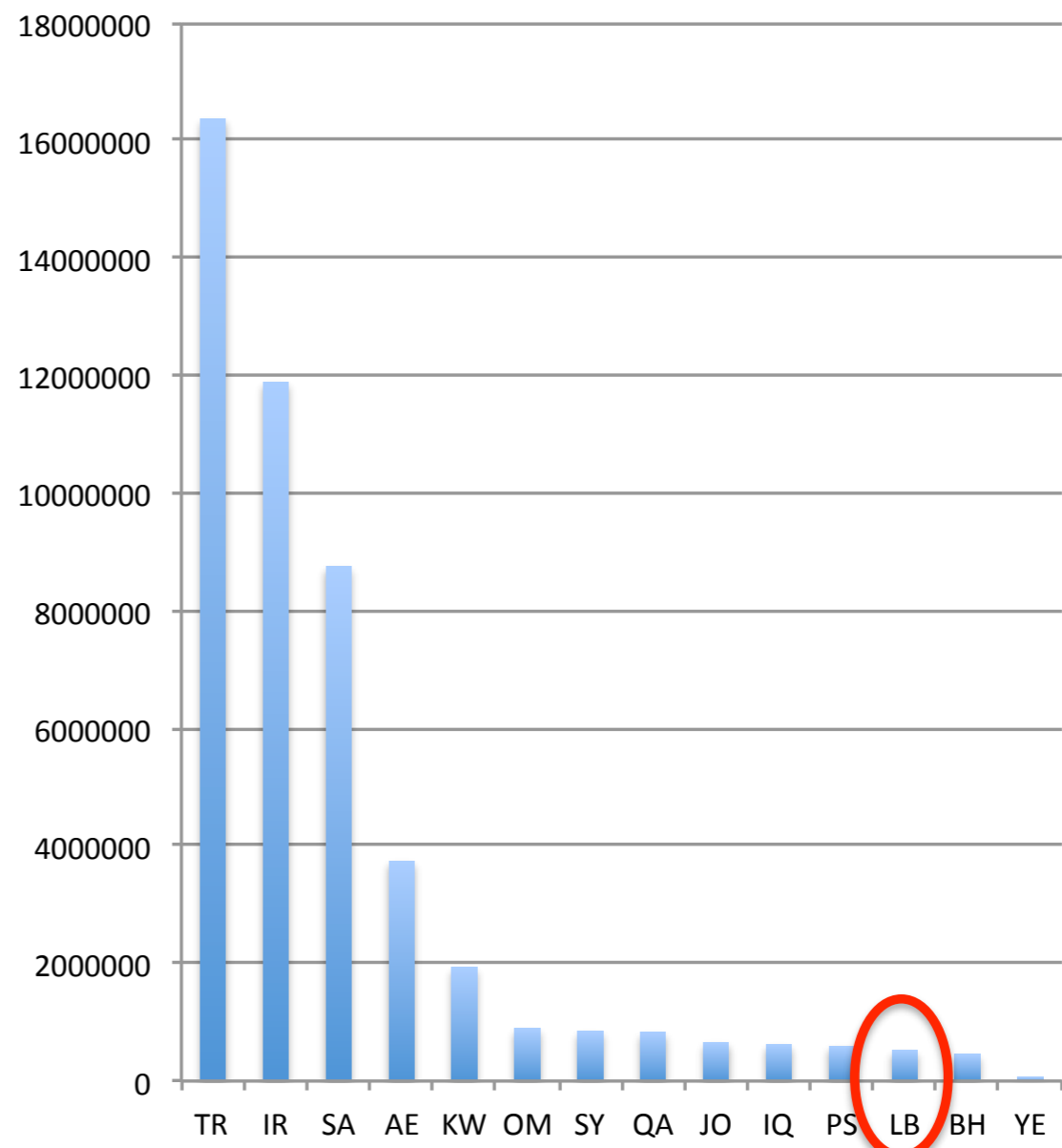
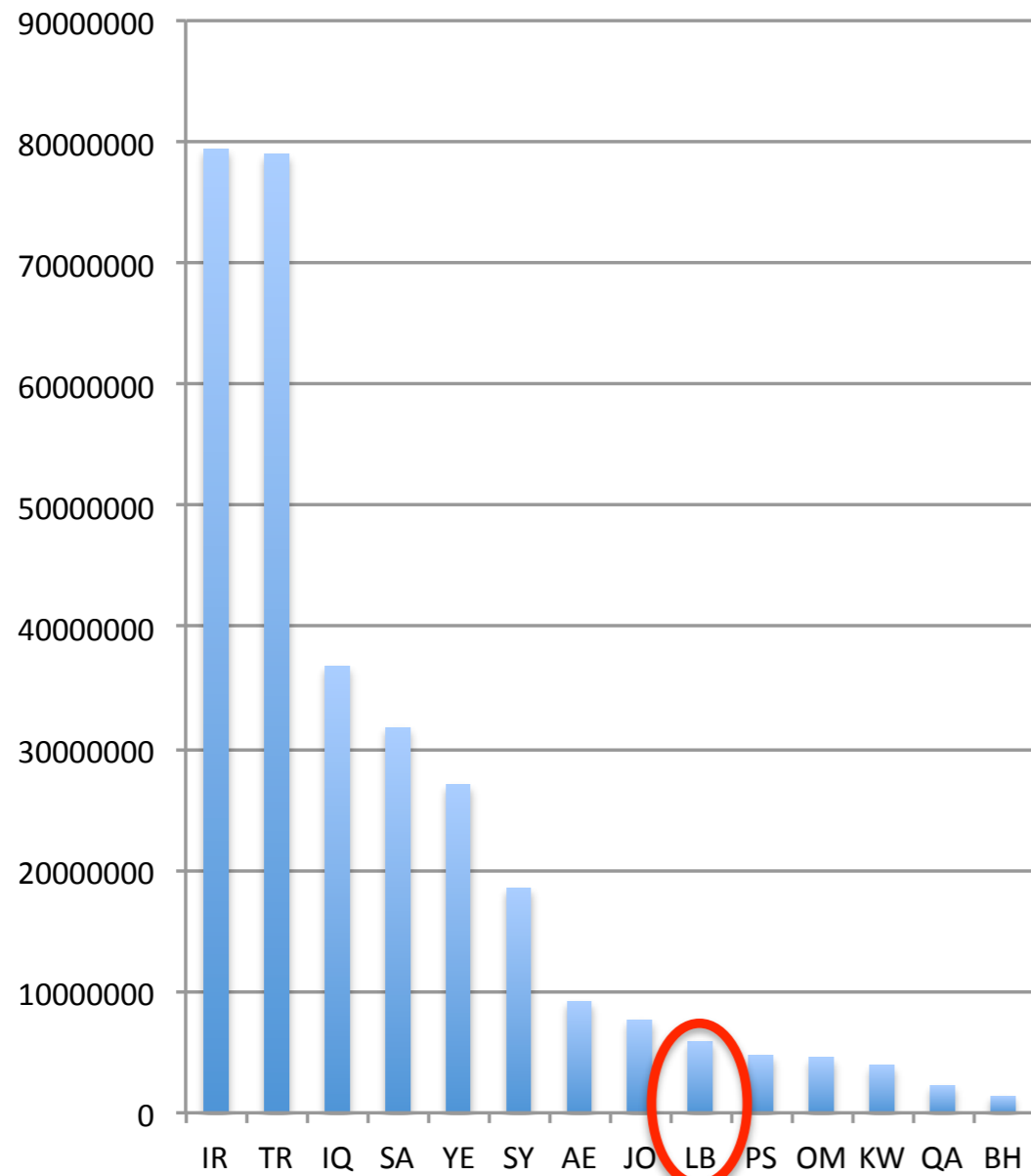
# Aggregate IPv4 Space by Country



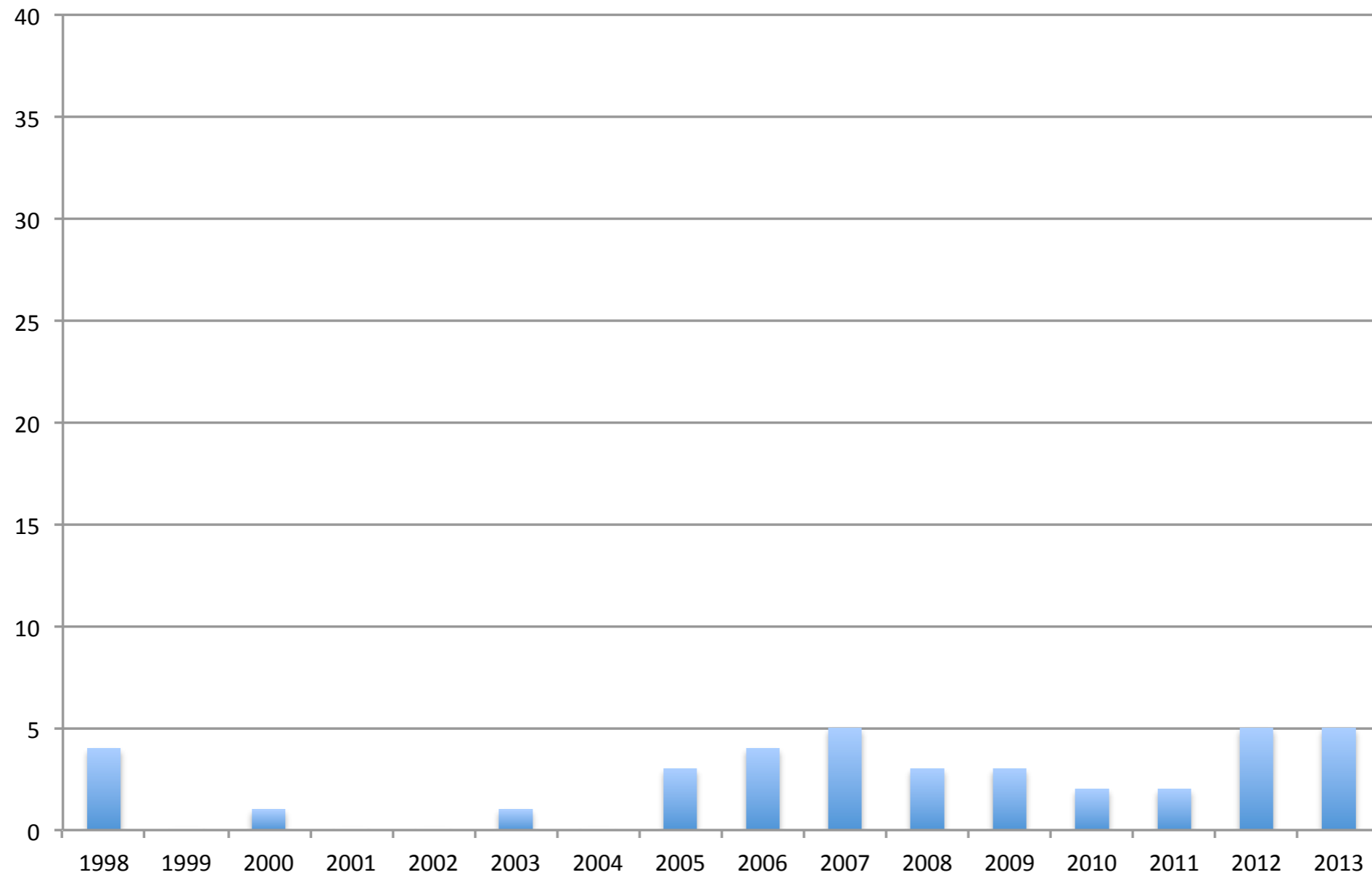
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# Middle East Stats

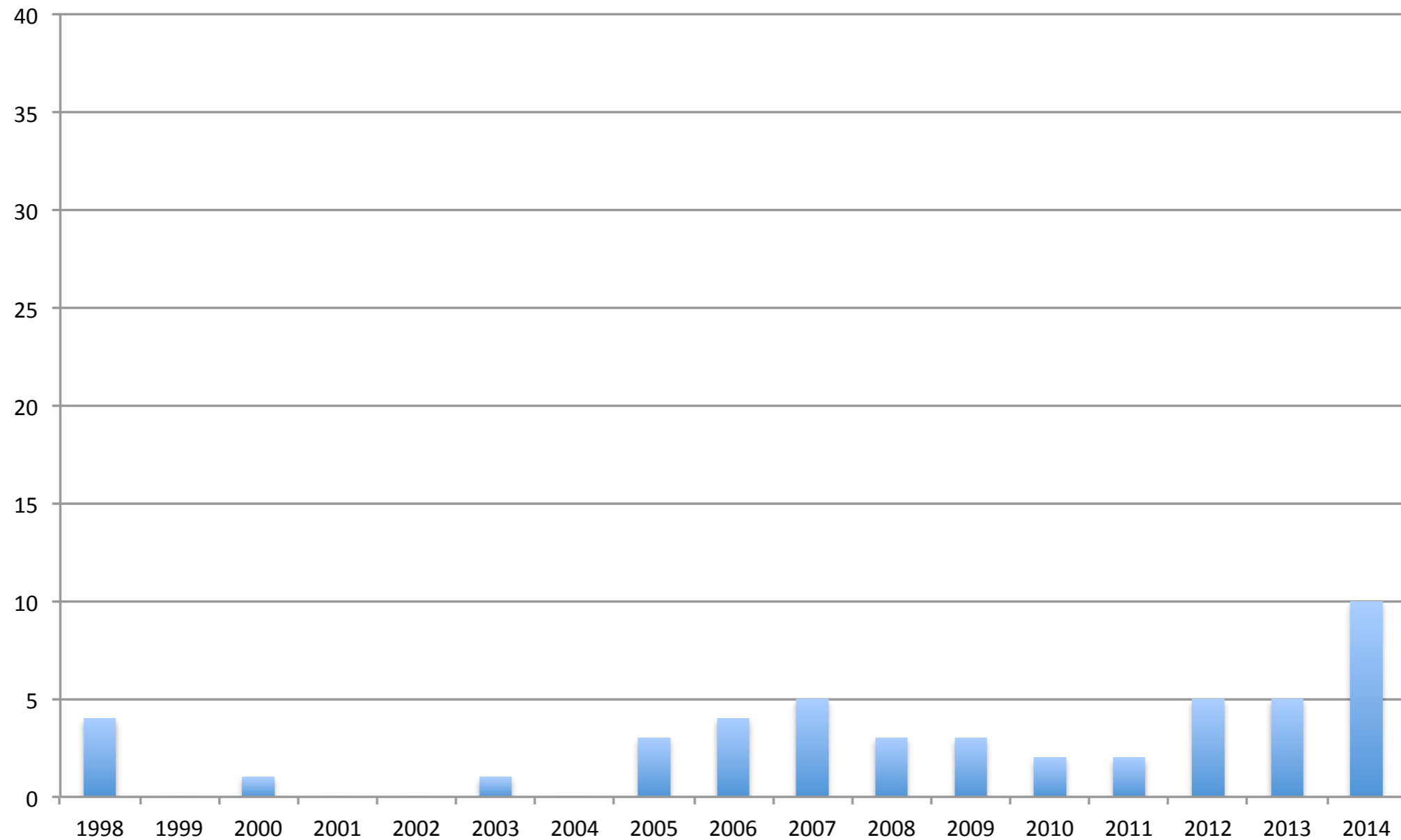


# RIPE NCC Membership in LB



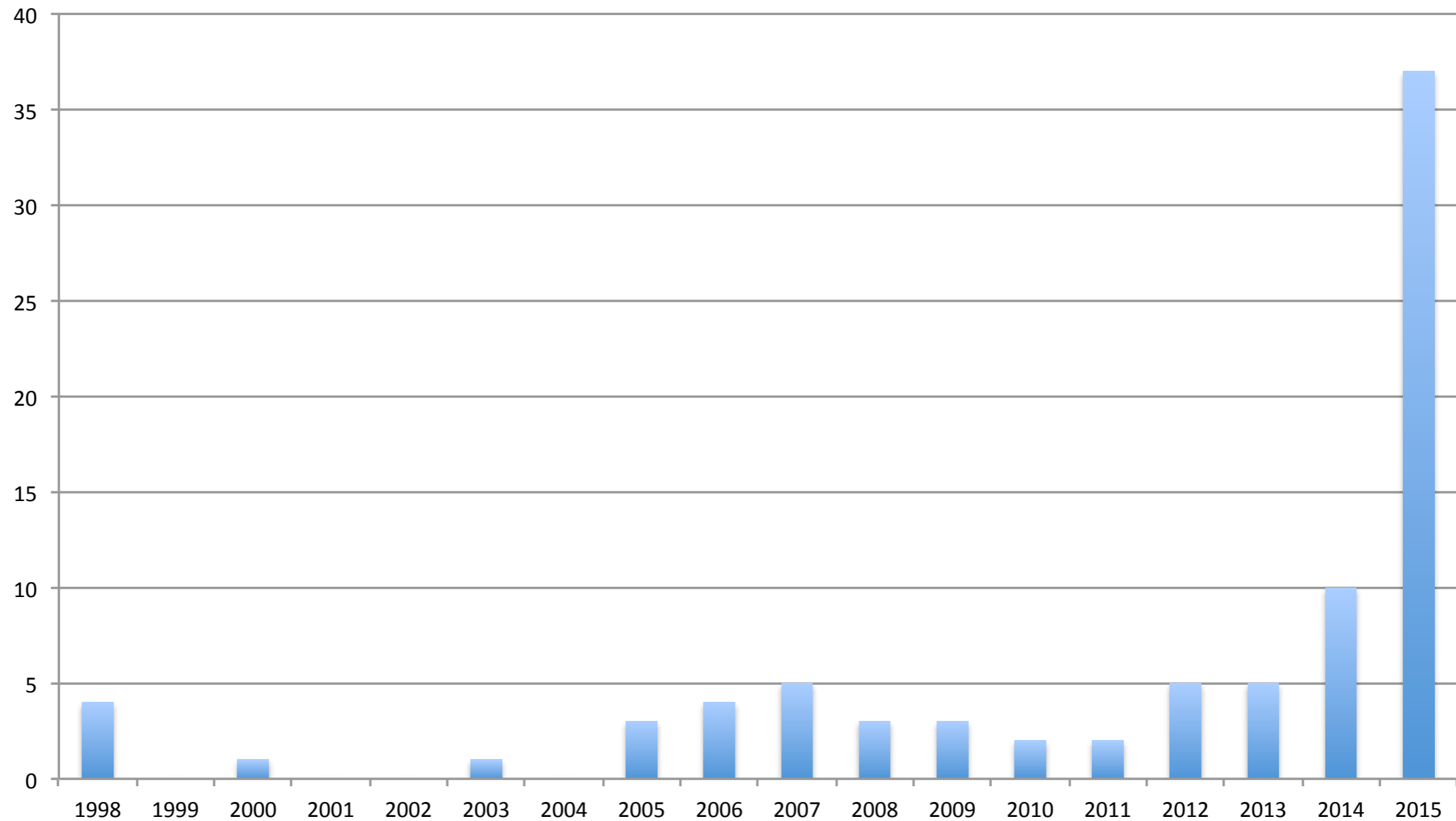
Total number of Members = 38

# RIPE NCC Membership in LB



Total number of Members = 48

# RIPE NCC Membership in LB



Total number of Members = 85



# RIPE NCC Membership Growth in the Middle East



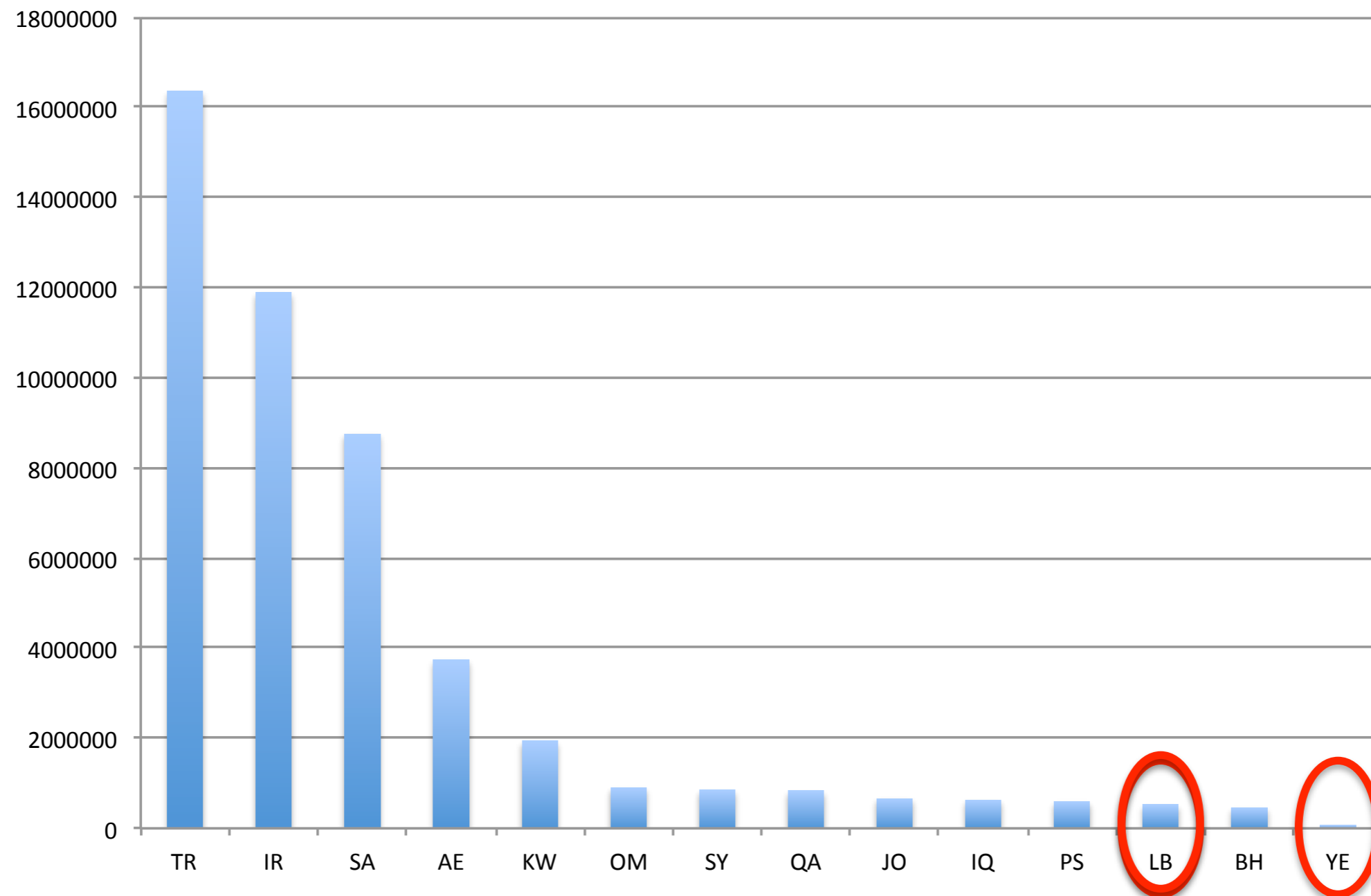
CC	% of Growth in 13	% of Growth in 14	% of Growth in 15
AE	30,76923077	38,23529412	25,53191489
BH	12,5	0	0
IQ	23,68421053	19,14893617	35,71428571
IR	9,375	16,42857143	46,62576687
JO	13,33333333	2,941176471	2,857142857
KW	6,666666667	0	0
LB	15,15151515	26,31578947	77,08333333
OM	20	33,33333333	12,5
PS	15	0	17,39130435
QA	37,5	0	18,18181818
SA	9,677419355	14,70588235	10,25641026
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TR	12,75167785	24,4047619	29,18660287
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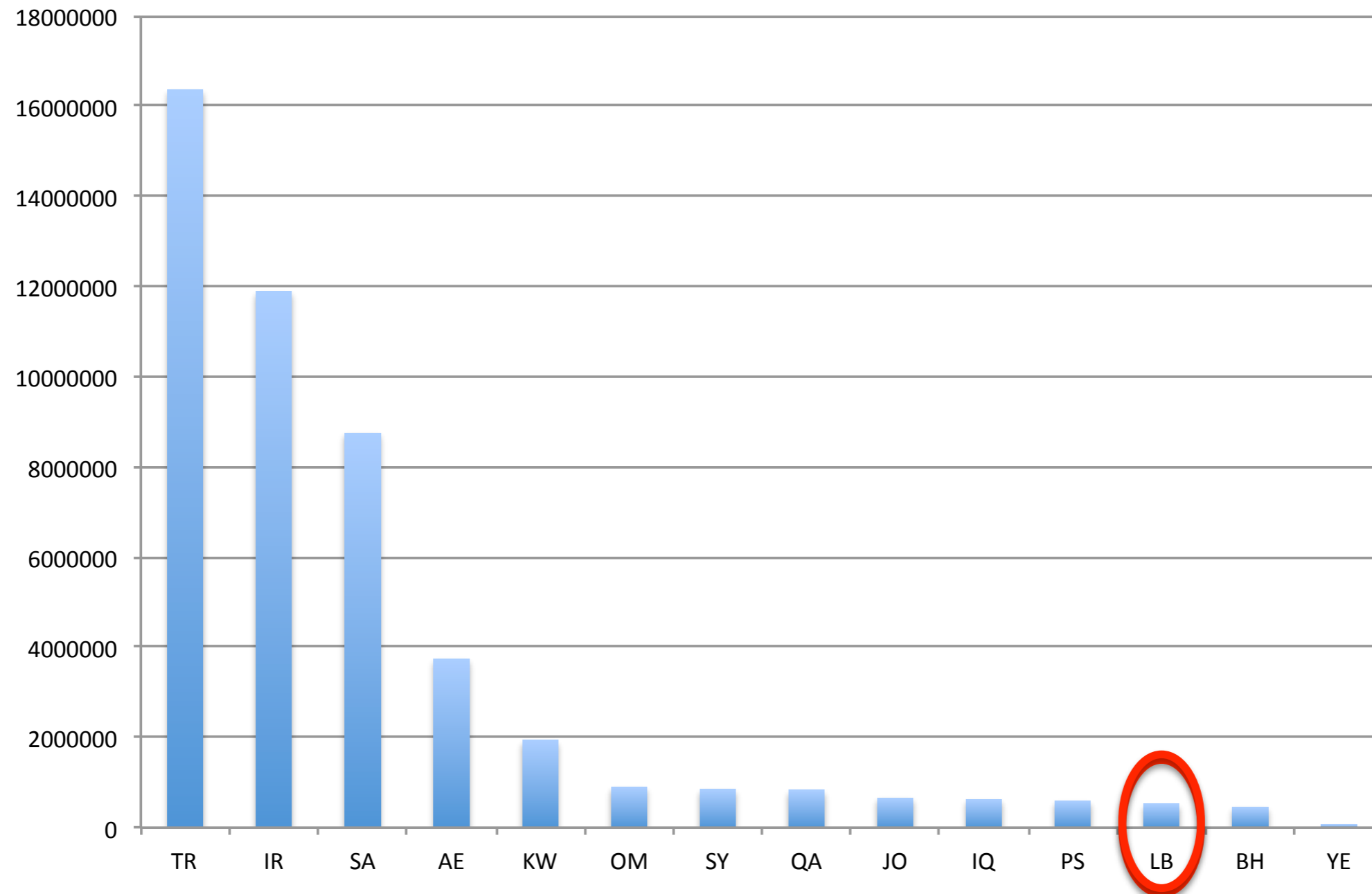


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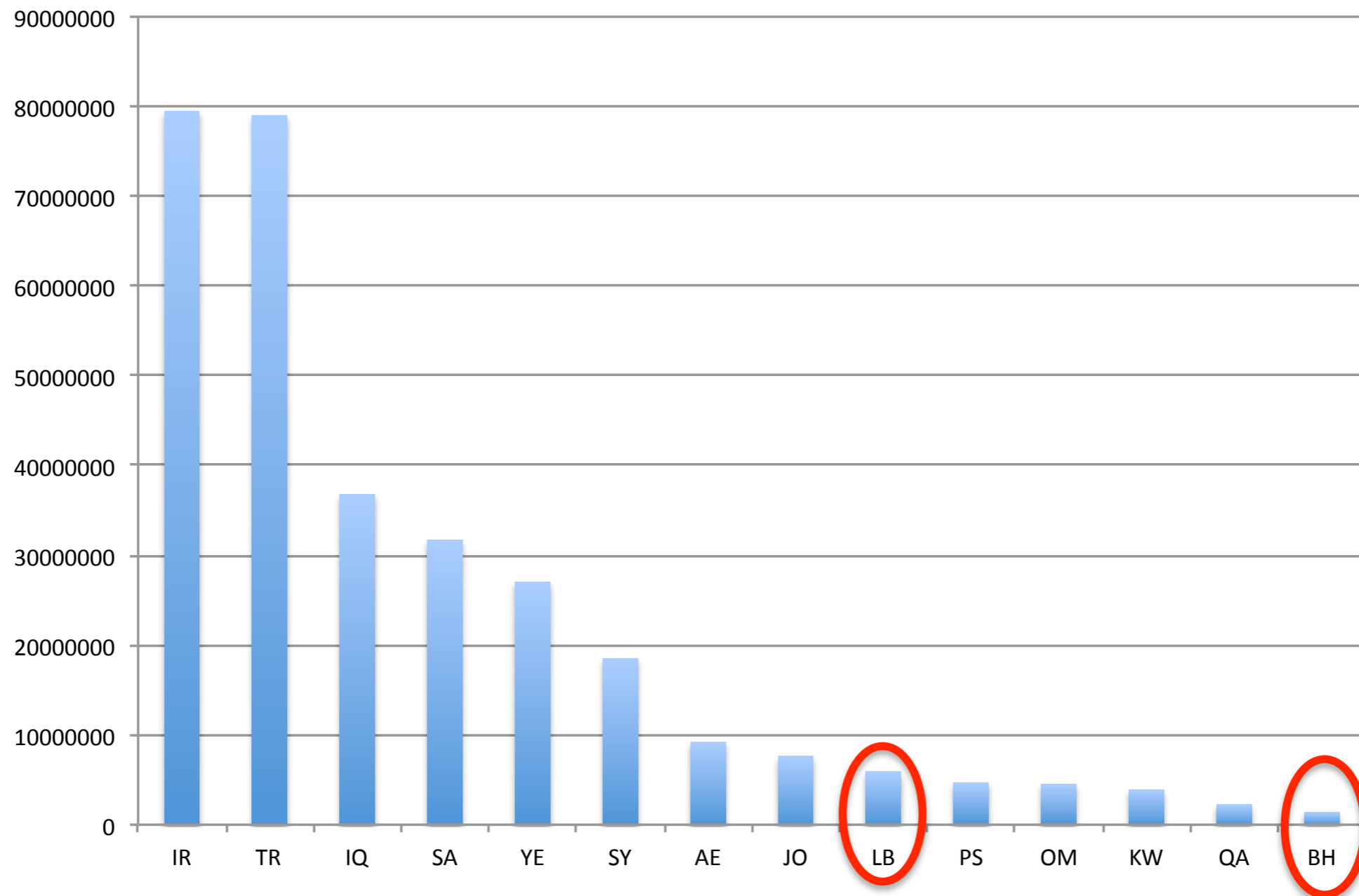


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# Country Ranking by Population



# IPv4 Transfers in UAE 2014



Original Block	Transferred Blocks	From	To	Date
109.177.0.0/16	109.177.0.0/16	AdNet Telecom Services SRL	Emirates Telecommunications Corporation	26/08/2014
151.253.0.0/16	151.253.0.0/16	AdNet Telecom Services SRL	Emirates Telecommunications Corporation	26/08/2014
31.215.0.0/16	31.215.0.0/16	AdNet Telecom Services SRL	Emirates Telecommunications Corporation	26/08/2014
5.107.0.0/16	5.107.0.0/16	S.C. GVM SISTEM 2003 S.R.L.	Emirates Telecommunications Corporation	26/08/2014
5.192.0.0/14	5.192.0.0/14	AdNet Telecom Services SRL	Emirates Telecommunications Corporation	26/08/2014

Total aggregate transferred IPv4 space = 524,288  
Total aggregate IPv4 space in Lebanon = 528,640





**Thank You  
& Lets Discuss**

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