GRAND DUCHY OF LUXEMBOURG
Ministry of Foreign Affairs

Directorate for Development Cooperation

European Union Africa
Infrastructure Trust Fund

PeeringDB and Role of Peering Coordinators

Internet Society™

The PeeringDB

PeeringDB Background

- PeeringDB is a 100% volunteer-driven system.
- Database written by Richard Steenbergen.
- System runs off donated hardware.
- Network connectivity provided by Server Central.
- Incorporate as an organization in 2011.

What is PeeringDB?

- A peering database
  - Every network should have access and an entry
  - Every network should keep their information maintained
- Created by and for peering coordinators
- A common place to publish information
  - Lets other networks know about your network
  - Lets other networks know how to contact you
  - First stop when deciding where and whom to peer with
- A reference database for:
  - Network Access Points (NAPs) / Internet eXchange (IX) points
  - Colocation facilities

What the PeeringDB is NOT

- PeeringDB is not your own sales funnel:
  - Do not mine data looking for sales opportunities.
  - Do not send UCE to contacts in PeeringDB.
  - Will lead to public embarrassment and a ban of your company

PeeringDB Tips

- Interaction:
  - Based on a simple web interface.
  - PeeringDB team will create an account on your behalf.
  - Account can be read-only or read-write in nature.
  - Use your work e-mail address; validated much faster.

- Use:
  - Has become the default location for peering data.
  - Peering requests will almost always lead to a search.
  - Keep your records up-to-date including NOC phone numbers

PeeringDB Tips

- Searching PeeringDB:
  - Finger:

    finger as37100.peeringdb.com
  - Whois:

    whois –h peeringdb.com as37100
  - MySQL:

    mysql –u peeringdb –ppeeringdb –h peeringdb.com Peering
  - Open URL's:

    http://as37100.peeringdb.com

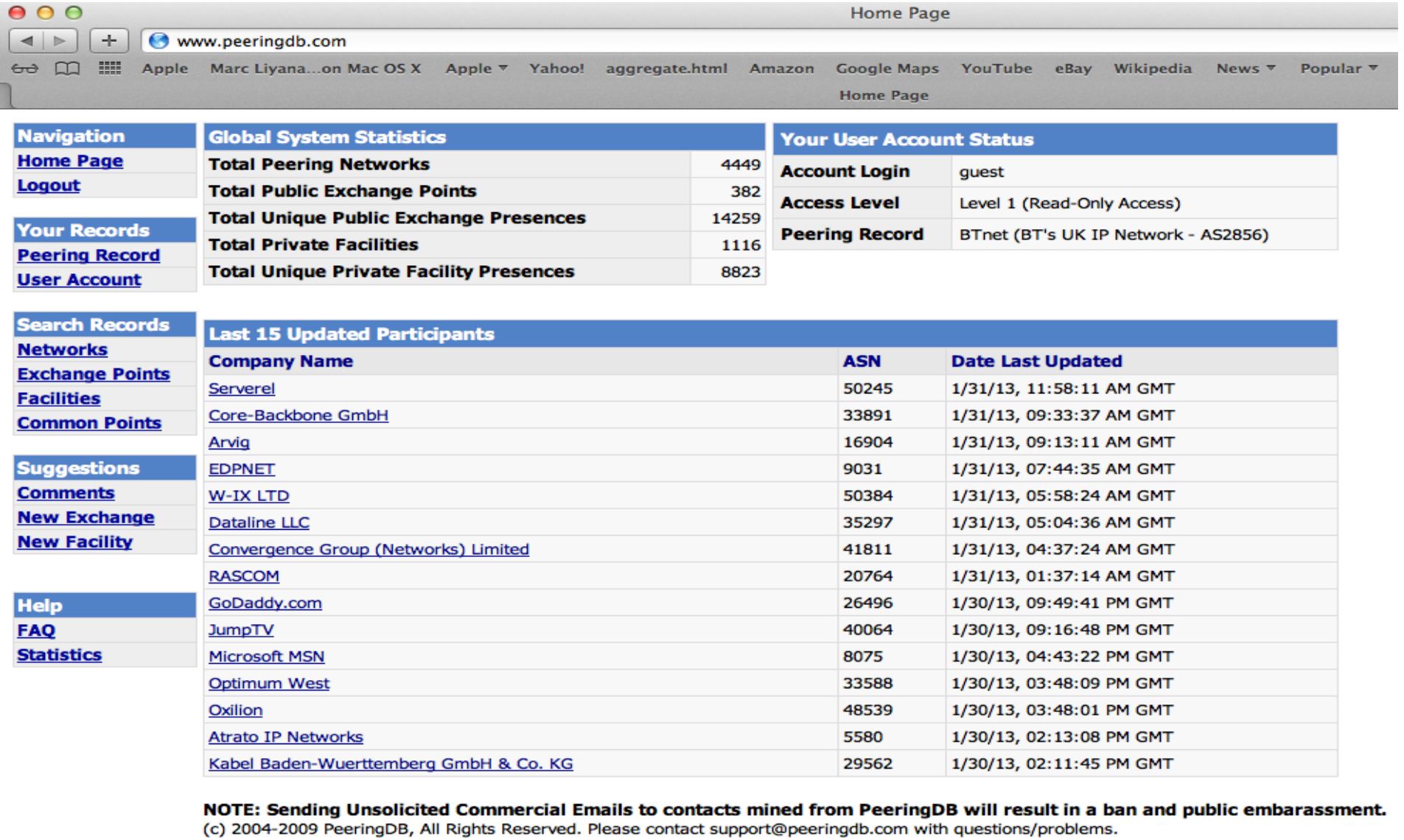
Getting started with peeringDB

- Navigate to www.peeringdb.com and register a user account. Use your work email address.

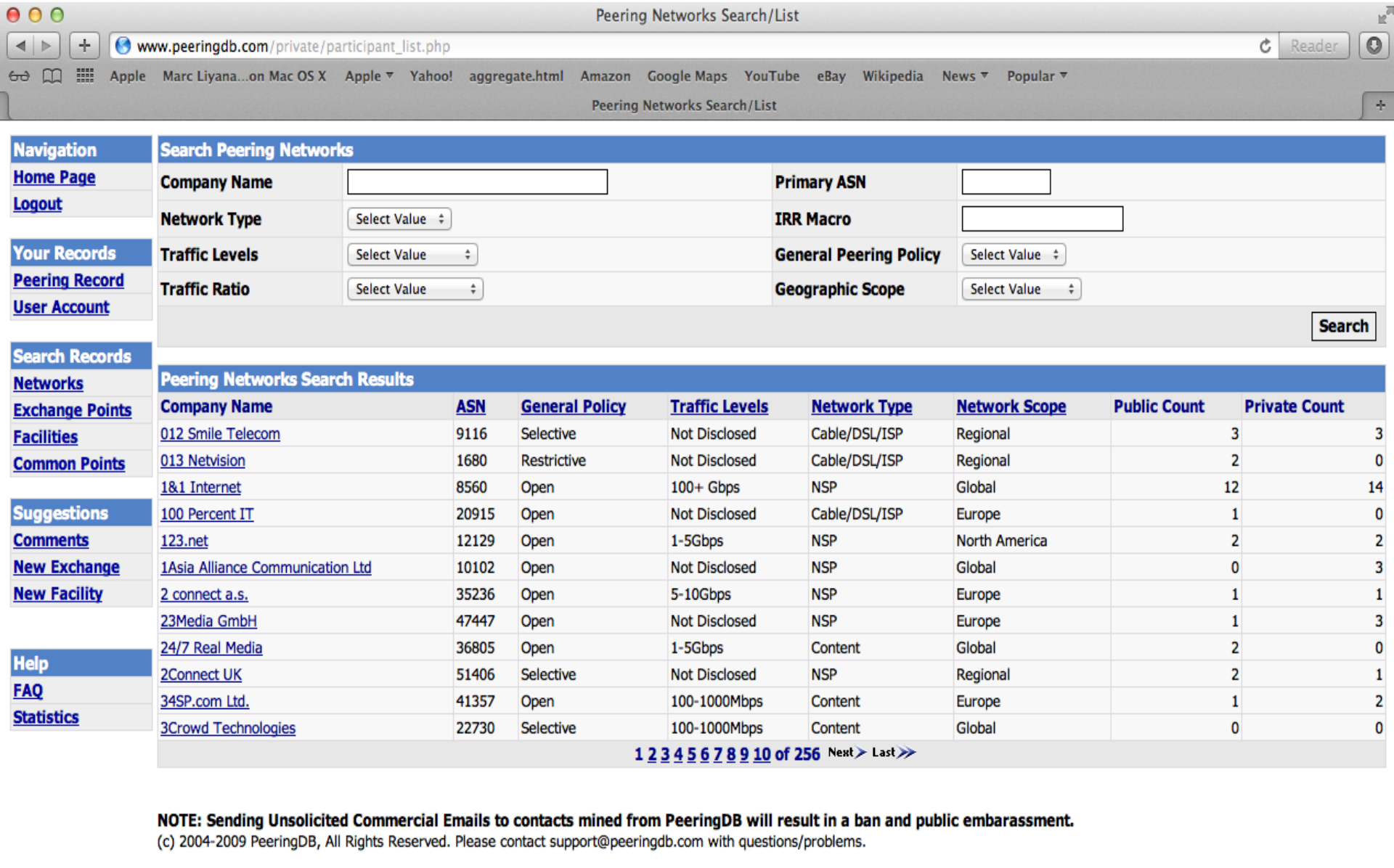
- You will then be prompted to attach your user record to a network record. If one already exists for your company, you will need to be verified by the creator of the account. If one doesn't exist, you can create your company record.

- Putting more information into your company record will ensure more people will know about you and contact you!

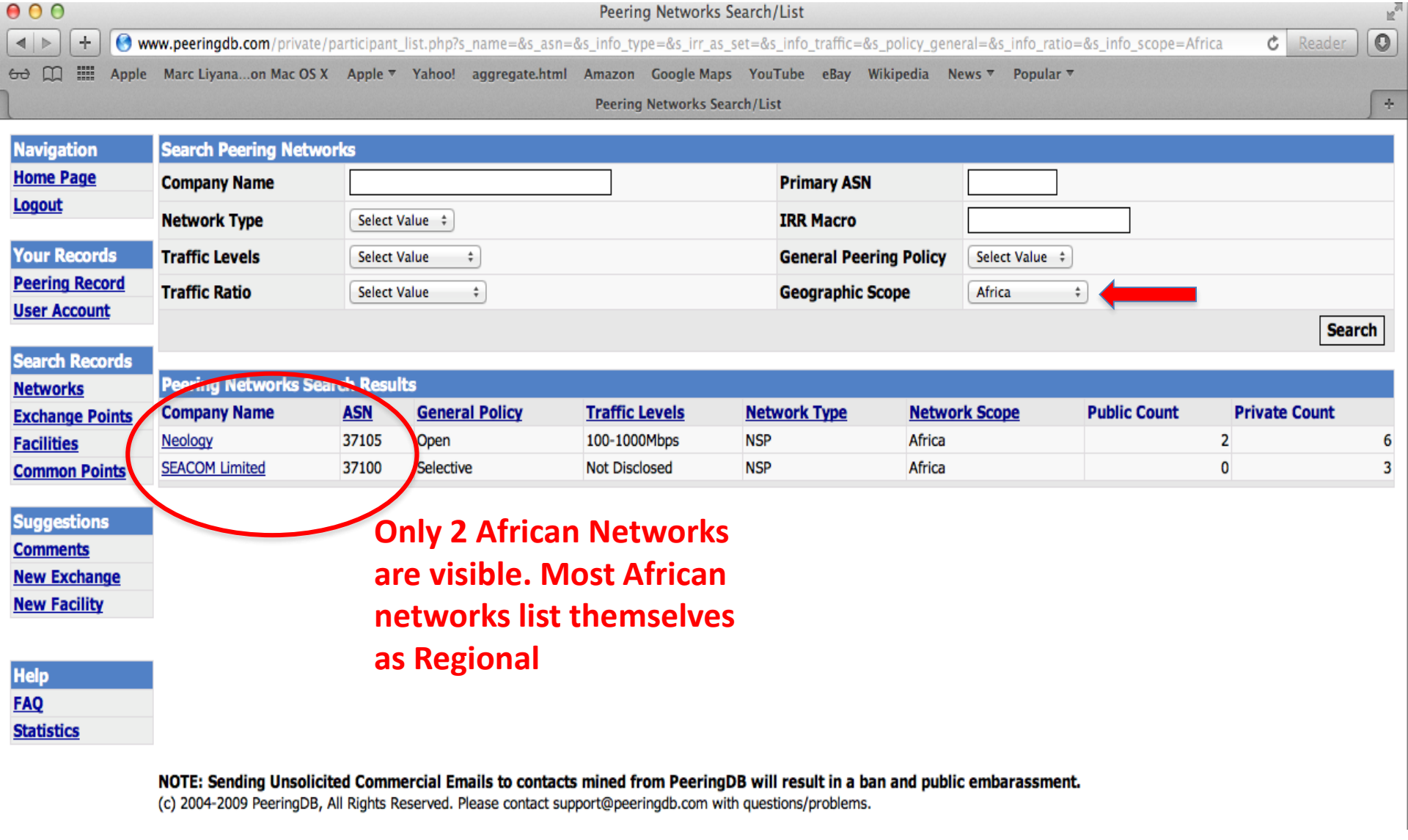
PeeringDB homepage



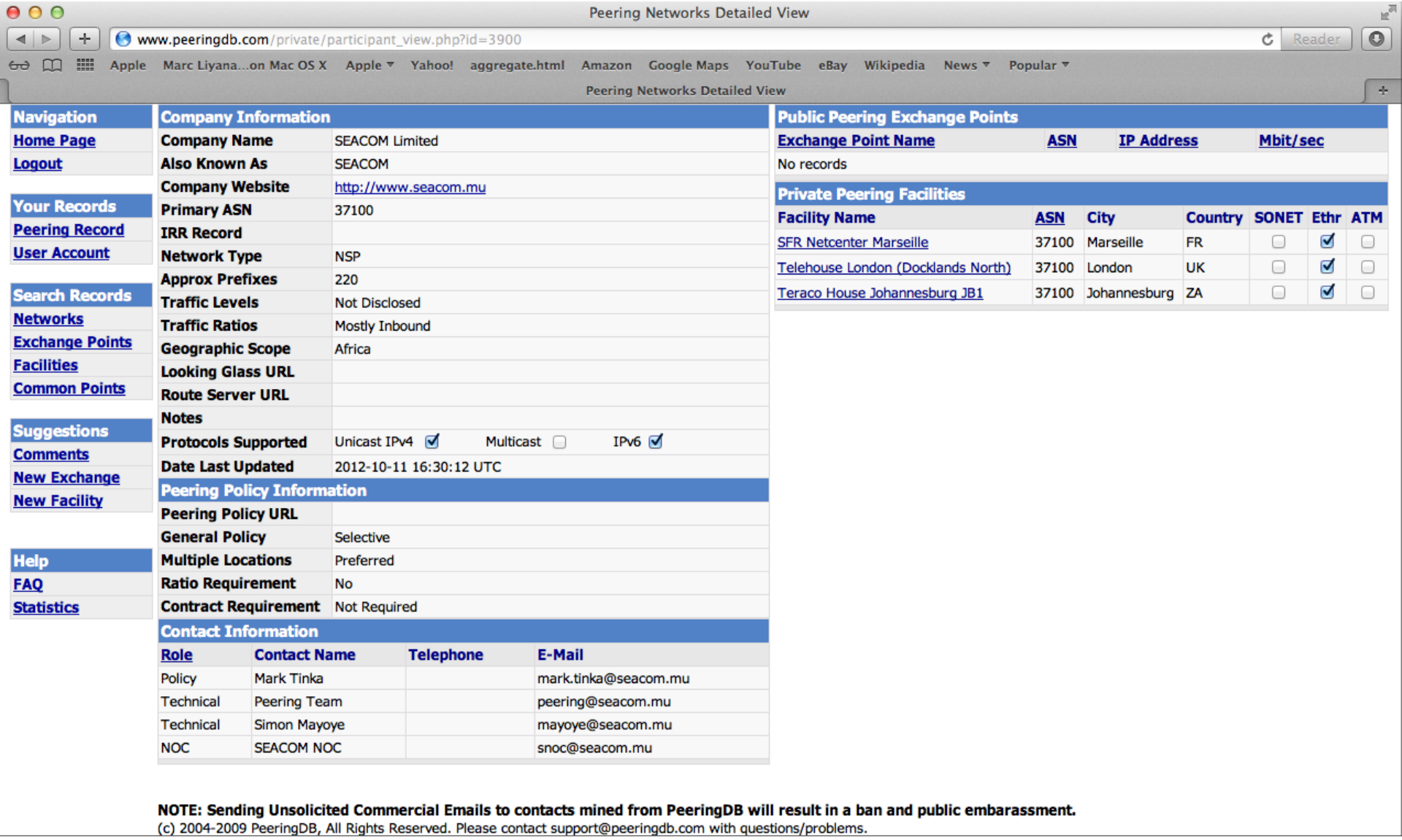
Networks Page (All)



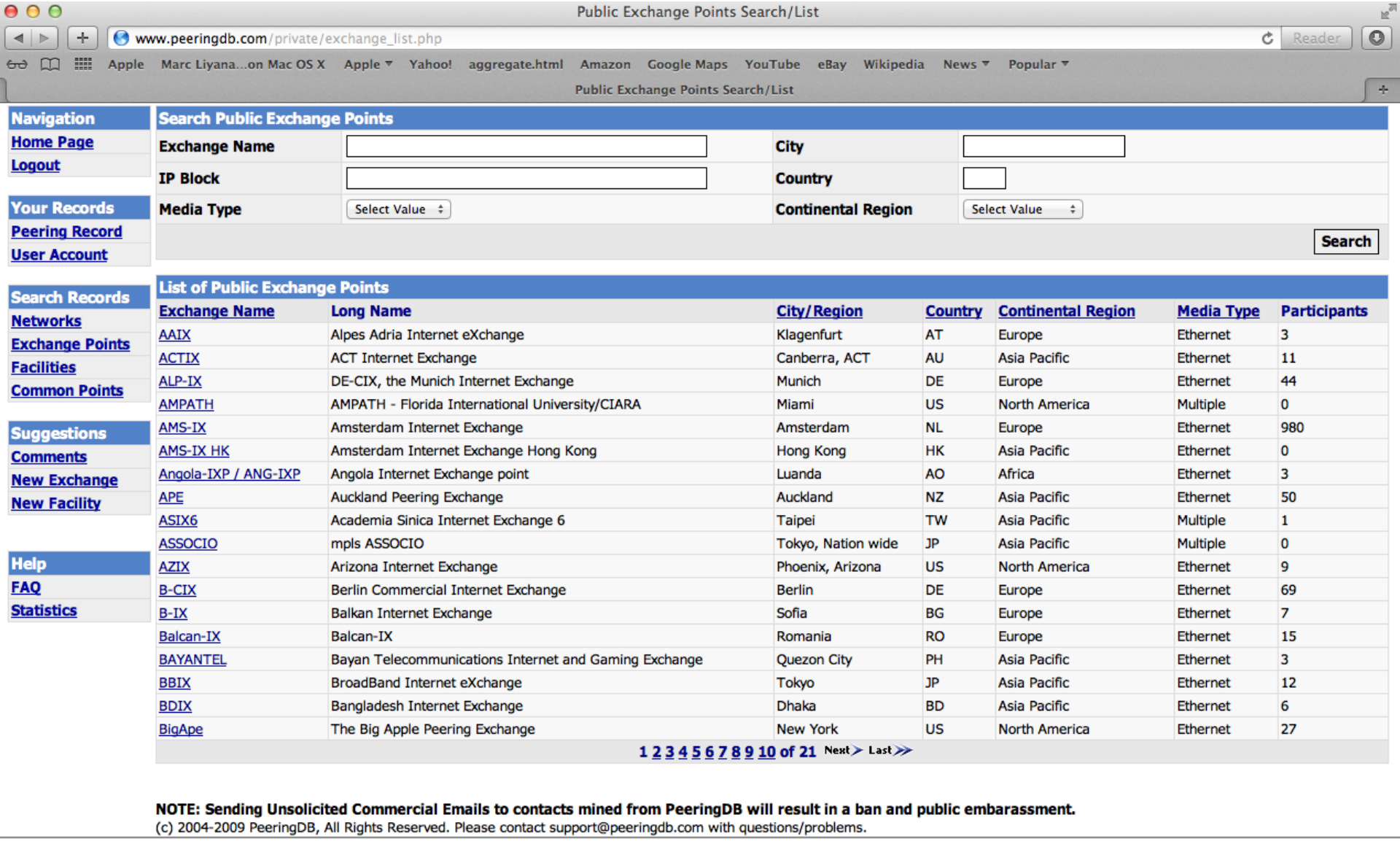
Networks Page (Africa)



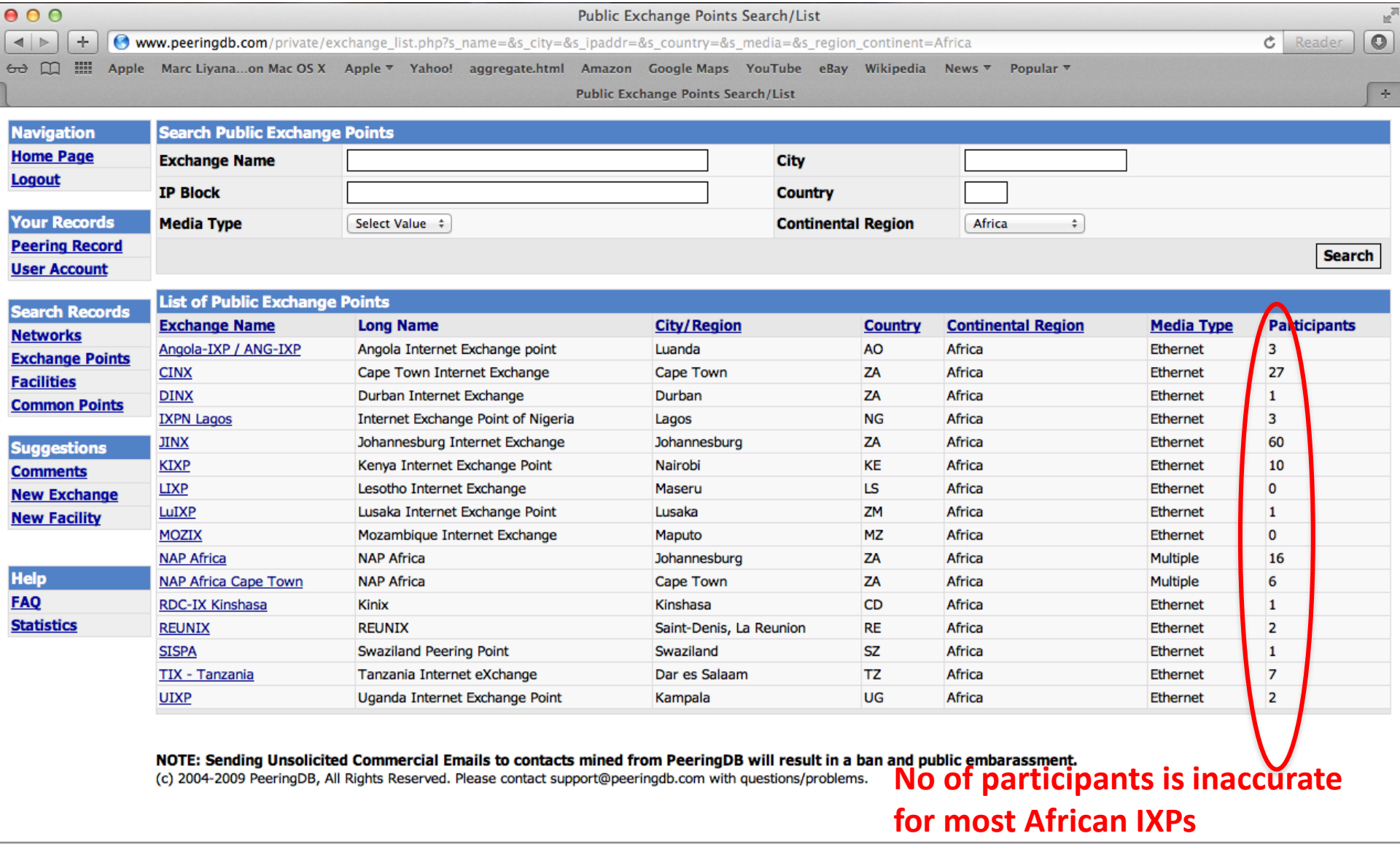
PeeringDB Network Info ..



PeeringDB IXPs view



PeeringDB IXPs view (Africa)



No of participants is inaccurate for most African IXPs

Peering Coordinator

What a Peering Coordinator is not…

- Salesman
- Product manager
- BGP expert
- Network architect

Peering Coordinator Skill Sets

- **Technical**
  - Ability to understand the technical aspects of peering and Interconnection.
  - Interpret peering and flow information
- **Social**
  - Ability to build and maintain relationships within the peering community
  - The “go to guy”
- **Business**
  - Peering is more about the business case
  - Peering coordinators should be able to develop peering business opportunities
  - Ability to calculate peering costs and identify peering locations and opportunities
- **Legal**
  - Some peering agreements involve peering contracts and negotiations. Therefore an ability to review and negotiate contractual agreements is a useful skill

Conferences to attend

- Africa Peering and Interconnection Forum (AfPIF)
  - Best concentration of African network operators, IXP Operators, and peering coordinators from around the world.
- Africa Network Operators Group (AfNOG)
  - Held annually with a good mix of operators, NRENs, etc
- European Peering Forum
  - Good mix of North American, European, and Asian peering coordinators.

Tips for successful conferences

- Know who is attending
  - Check the attendee list and make a list of people that work at networks that you work or want to work with. Ask the meeting coordinators to help with introductions if necessary.
- Schedule meetings before you arrive
  - The best way to ensure you speak to everyone you want to is to email them and fill up your appointment calendar.
- Send out-going, friendly, English speaking people
  - A lot can get done at the actual meetings, but a good company representative can make the initial contacts and pass along contact information as well.

Peering negotiations

First and foremost, know your network

- Who are your marquee customers?
  - Your customers make you interesting. It's OK if you don't have transit customers, traffic sourced or destined to your network can many times be interesting enough.
  - Singly-homed traffic gives you power. There is only one place to get that traffic from, YOU!
- What markets and networks does your traffic come from? Where is it going?
- Does your network architecture/hardware allow you to expand into many or few sites?
- Have facts and figures of your network profile.

I know who am I, who are you?

- How do you know where your traffic is coming from/going to? You may have a gut feeling, but is your company going to spend millions of dollars on a feeling?
- Use flow-based tools to find out for sure, you may be surprised.
- Create a list of top networks that you exchange traffic with that you are not currently peering with, and rank them by amount of traffic.

Know your target peer's network

- Now you know who you want to peer with, what next?
- Before you contact them, find out where they have network POPs.
  - Check company website for network maps.
  - Check peering.db for a list of facilities and IXs.
- If possible, find out what size the network is
  - You may only be exchanging 1Gbps of traffic, but that may be 10% of their traffic. Most networks would welcome peering off that percentage of traffic.
- What type of peering strategy do they have?

The actual negotiation (part 1)

- Most networks have open peering policies, so if you're both connected to an IX, peering can begin within hours or days of initial contact.
- What if someone has a selective policy? Chances are if you have an interesting enough network or if they don't sell transit in your home market, you'll be able to peer.
  - Many selective networks have peering policies that they expect you to meet.

The actual negotiation (part 2)

- The most difficult network to get peering from is the restrictive network.
  - Timing is everything.
  - Some restrictive networks are forced to maintain a certain number of peered networks due to merger regulations. In these cases, smaller traffic flows are in your favor.
  - Depending on who your upstream is, there may be congestion or ratio issues with their peering partner, so to help alleviate those concerns, you may qualify for peering.
- You can’t get what you don’t ask for. To the bold goes the spoils!

Network expansion?

Expanding your network for peering

- Theoretically, you now know that if you expand into a new POP, you could pick up X amount of peering, time to start making introductions. But who do you talk to?
- Contact the colocation provider and IXP operators in the target city. They usually have contacts at all the networks they provide services to. Plus, more peering for you means more business for them, so they have business reasons to want you to join and exchange traffic.
- Many networks use generic mailing lists for common tasks, such as peering@ or noc@

Expanding your network for peering

- Email either the contacts you gather or as a worst case scenario, the peering@ list alias.
- Include a description of your network is and why they should want to peer with you. This is your opportunity to brag about your network.
- Create a list of favorable responses and how much traffic that represents.
- Now the important part, find out whether it makes sense for you to expand your network in order to peer!

Building a business case

- Get quotes from colocation providers and transport providers and compute how much it's going to cost to build a new POP.
- Divide that cost by how much traffic you believe you will be able to peer.
- If that cost is lower than how much you pay for transit, you have a good case to expand your network.
- Transit may cost less. It's not always cheaper to peer.
- Consider other factors like performance, redundancy, ability to meet previously unattainable peering policies.

In summary

Summary

- Devote one person to peering at your company, it's a full time job!
- Design your network so that you are flexible enough to achieve your traffic engineering goals.
- Create a viable peering strategy that fits your network.
- The more visible you are, the more successful your peering will be. This includes using industry standard mailing list aliases and joining peering.db!
- Know as much about your target network as you can.
- Send the right people to the right meetings.
- Remember that in the end, it's all dollars and sense.

Acknowledgement and Attribution

This presentation contains content and information originally developed by the following organisation(s)/individual(s) and adopted for the African Union AXIS Project

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