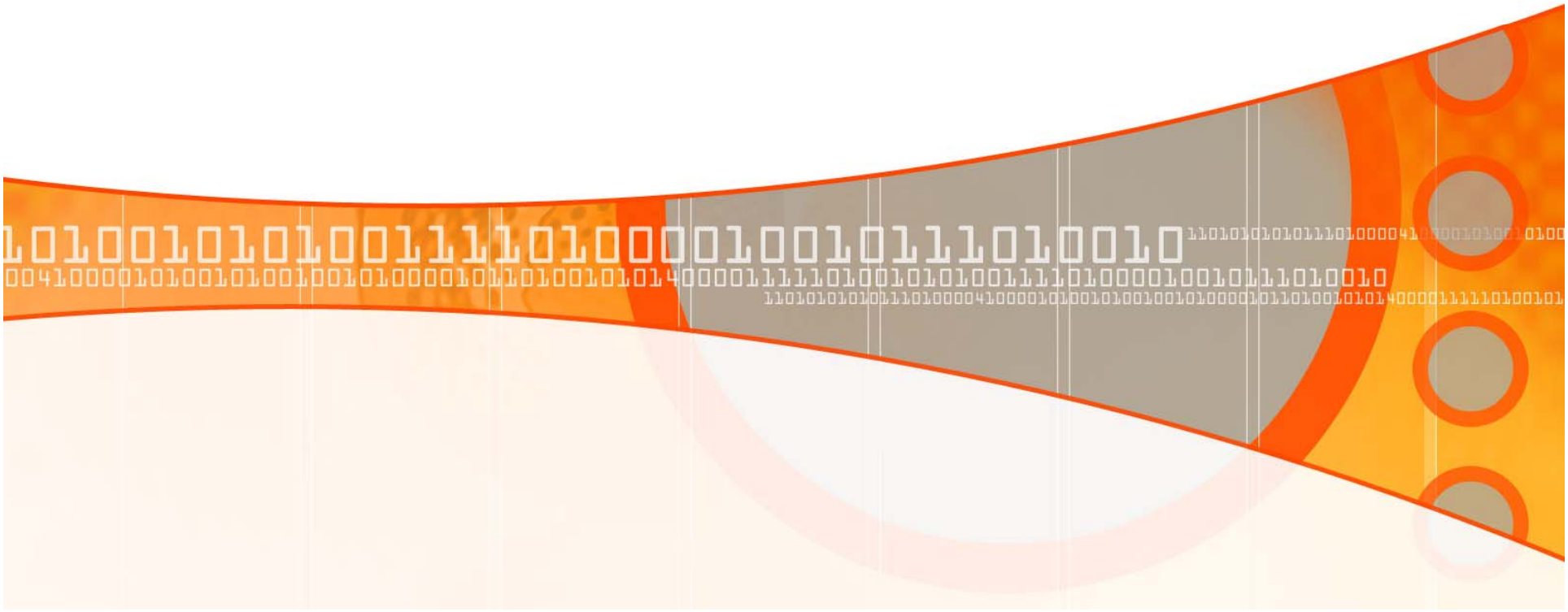
Reverse Engineering for fun and ... BoF it!

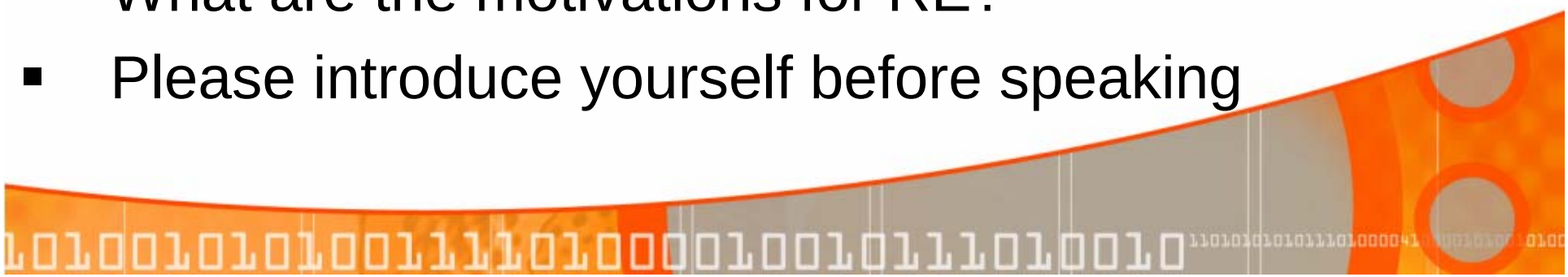
Pedram Amini and Chris Eagle



Introductions and Agenda

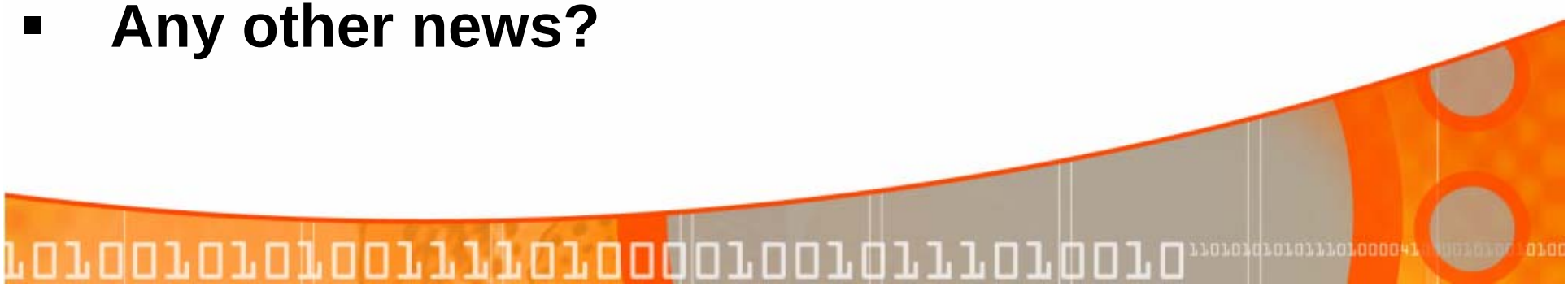
- **Pedram Amini**
  - TippingPoint, a division of 3Com
- **Chris Eagle**
  - Associate Chair, Computer Science, Naval Postgraduate School

- RE has gotten a lot of attention in the past year
- The goal of this session is to present ideas and resources to foster an open discussion.
- What are the motivations for RE?
- Please introduce yourself before speaking



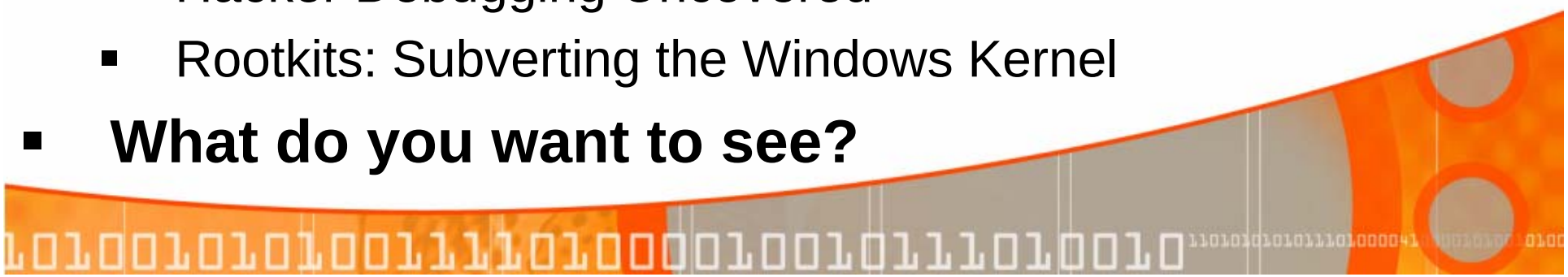
RE in the News 2005-Present

- **Sony Rootkit debacle**
  - Mark Russinovich (http://www.sysinternals.com/blog/)
- **Microsoft WMF unofficial patch**
  - Ilfak Guilfanov
- **Blizzard World of Warcraft “rootkit”**
  - Greg Hoglund
- **Any other news?**



RE Resources 2005-Present

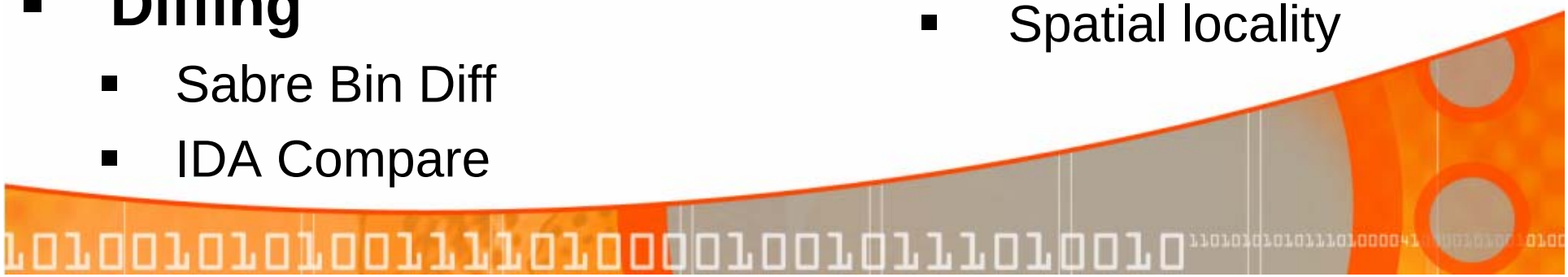
- **OpenRCE.org**
- **IDA SDK reference manual**
  - Steve Micallef
    - **http://www.binarypool.com/idapluginwriting/**
- **Ilfak Guilfanov's weblog**
  - **http://www.hexblog.com**
- **Books**
  - Reversing: Secrets of Reversing
  - Disassembling Code: IDA Pro and SoftICE
  - Hacker Debugging Uncovered
  - Rootkits: Subverting the Windows Kernel
- **What do you want to see?**



RE Tools 2005-Present

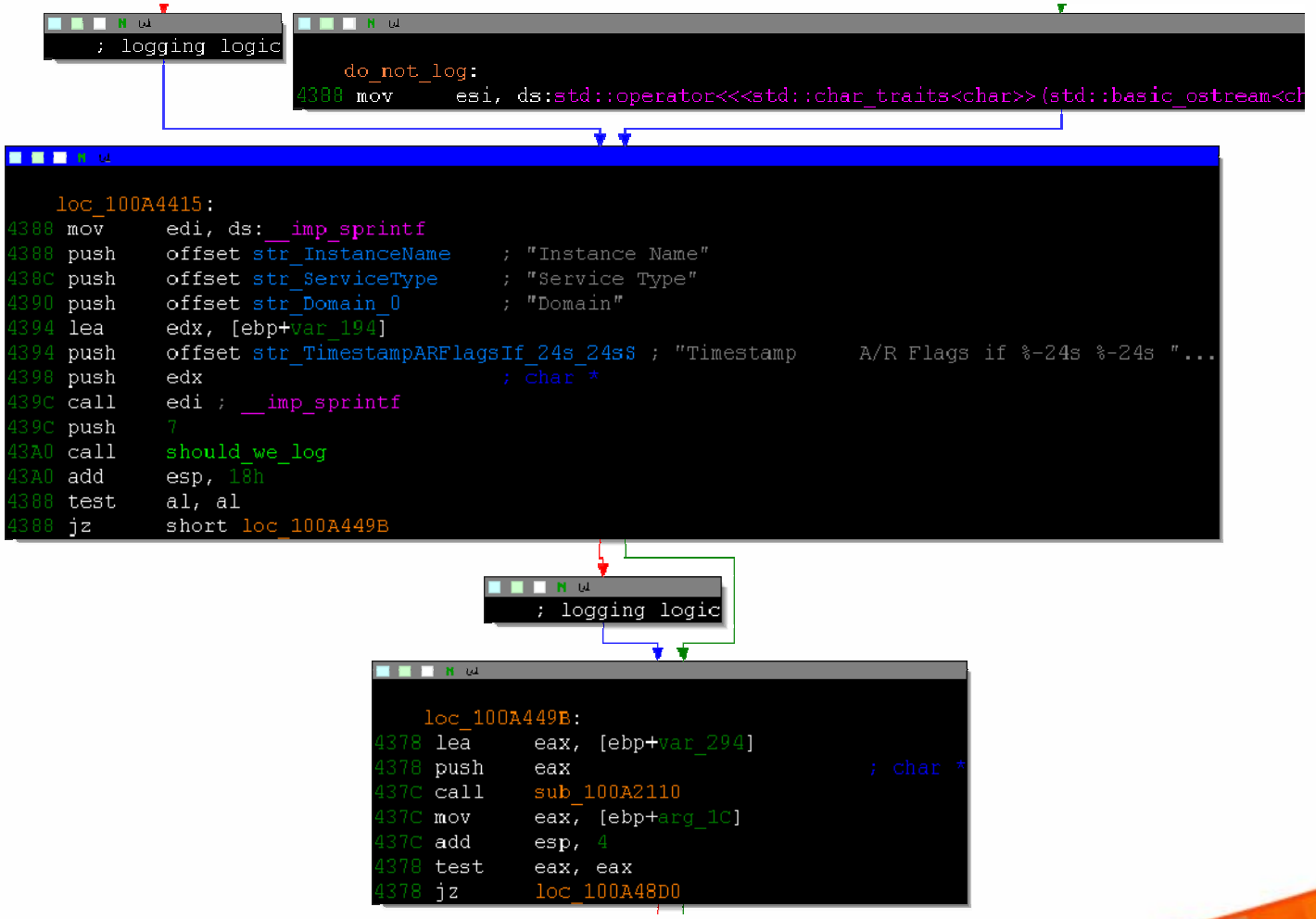
- **IDA Python**
  - REML
- **Visualization**
  - Process Stalker
  - Sabre Bin Navi
  - IDA 5.0
- **x86 Emu**
- **Collaborative**
  - IDA Sync / Olly Sync
- **Diffing**
  - Sabre Bin Diff
  - IDA Compare

- Symbolic name
- Graph heuristics
- Recursive functions
- String references
- In/out degree
- Small prime product
- Shortest path
- MD5 / “smart” MD5
- Push + call
- Constants
- Stack frame size
- Spatial locality



IDA 5.0 Graphing

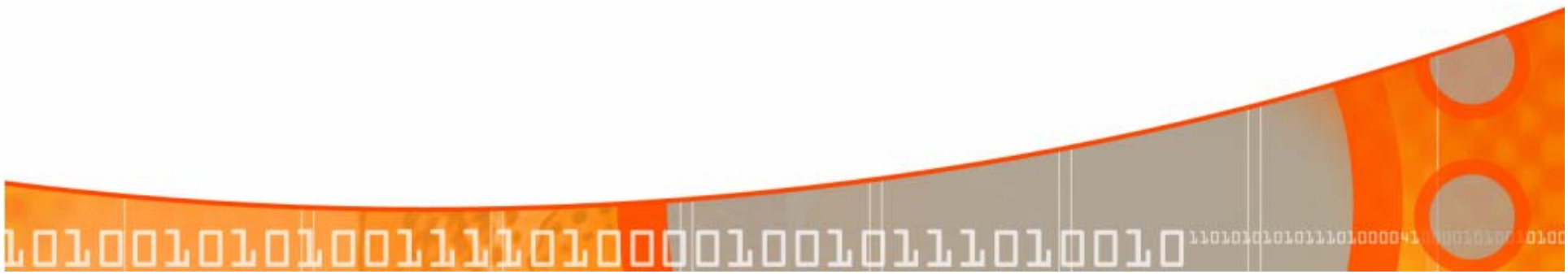
IDA 5.0 Graphing

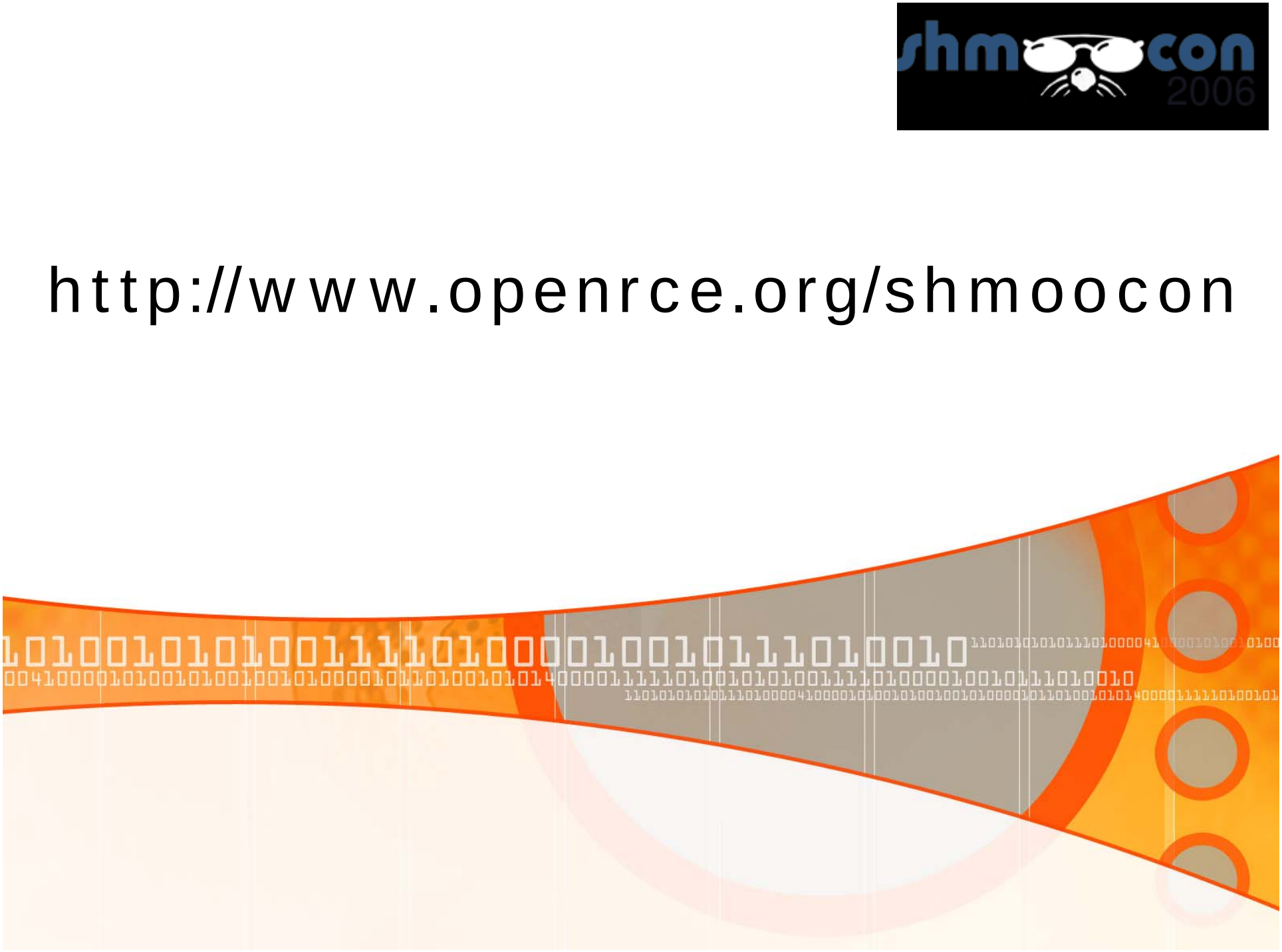


RE Tools Future

- PyDBG
- RE-Sync
- x86 Emu +visualization?

- What road blocks have you hit?
- What tools would you like to see?





http://www.openrce.org/shmoocon