



**NATIONAL FORUM**  
**ON CRIMINAL JUSTICE**  
July 22-25 2018 | Ft Worth TX

# “Technology Enabled” Evolution of Crime and the Changing Nature of Victimization



**Jim Emerson**



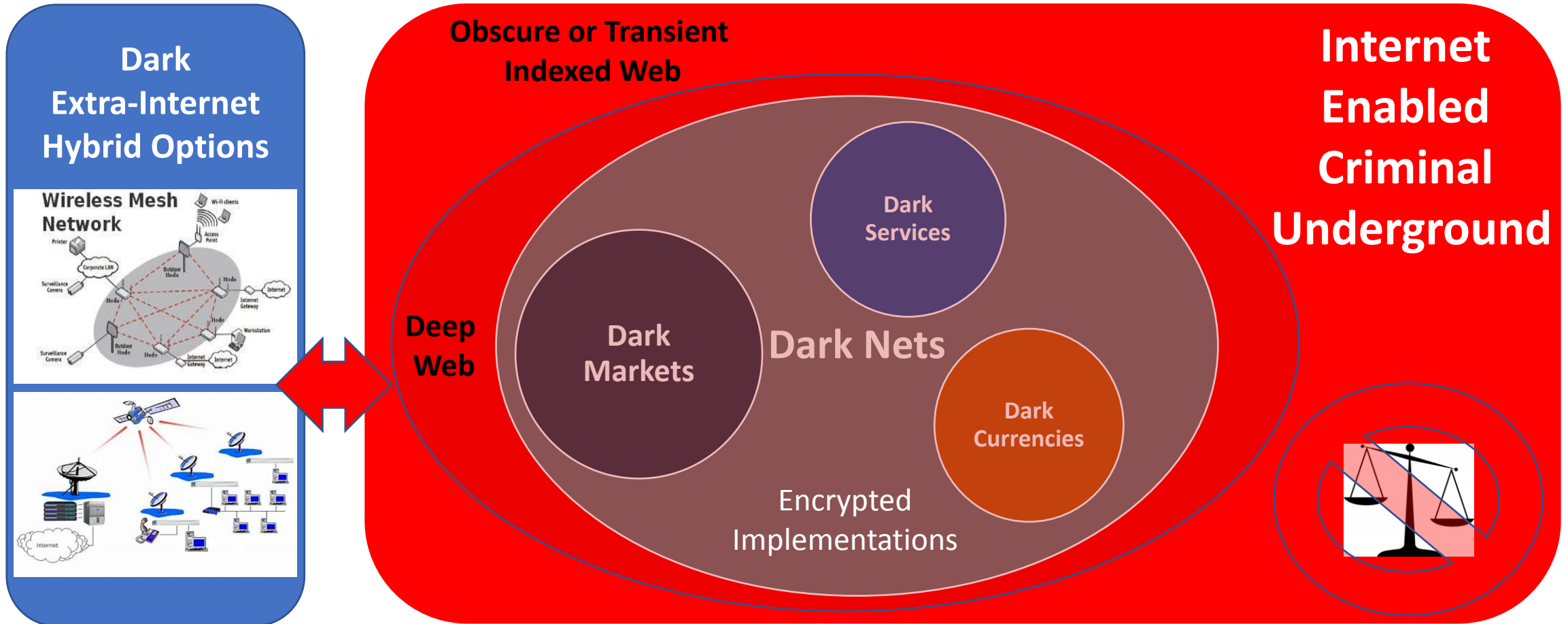
*While traditional crime rates are at historic lows, technology-enabled crimes appear to be on a steep rise.*



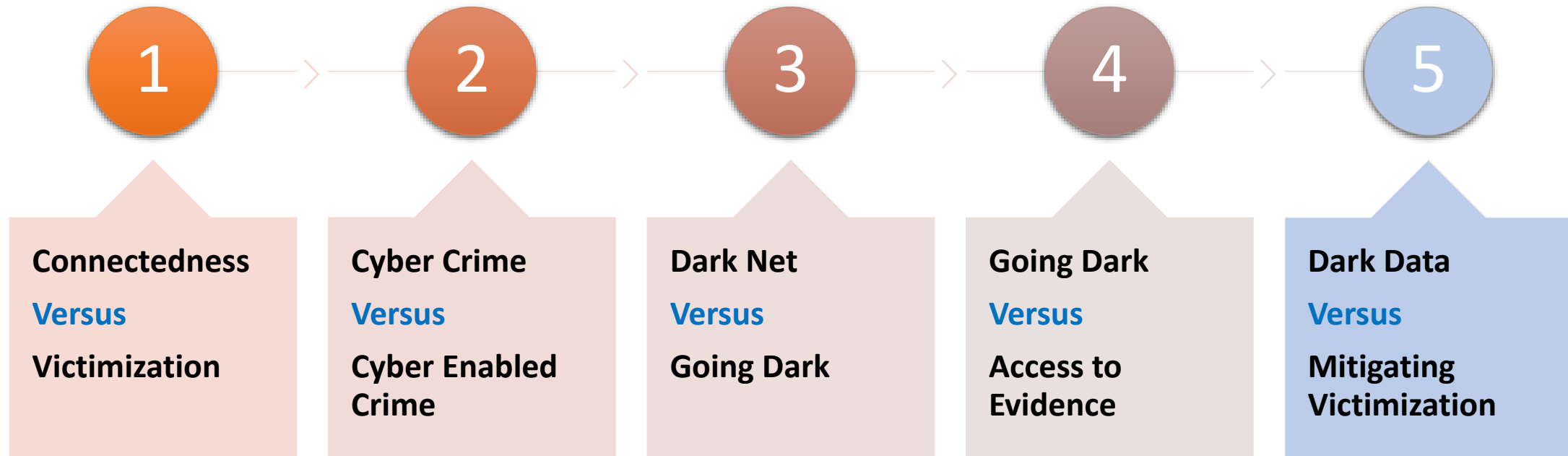
## Traditional Crime is Decreasing?

- What criminal justice statistics do we measure?
  - What extent does cyberspace enable crime?
  - Can we learn to measure cyberspace impact?
  - How large a factor is the DarkNet?
- 
- What is the DarkNet?

# Dark Net, Darker Net, Darkest Net...



# Defining Some Basic Concepts



# Connectedness Versus Victimization

- Broad Technology Connectedness
  - PRO: Scale, Access, Complexity, and Speed
  - CON: Scale, Access, Complexity, and Speed
- Criminals are FIRST to market
  - Data = criminal currency and tools > **Victims**
  - Infrastructure = reduced criminal risk > **Victims**
  - Both enable / enhance traditional crime > **Victims**
- Fortunately...
  - There are weak links for criminal activity
  - Probative points of action can be understood
  - Speed of action can be defined and met
- ***Unfortunately; All too often...***
  - ***Playing Catching up***
  - ***Rely on Certain Experts***
  - ***Rely on the Last Case/Experience***



# Cybercrime Versus Cyber Enabled Crime



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- One **no longer has to be smart** to be a proficient Cybercriminal
  - Do it yourself; malicious code, crimeware, custom CVE scanners, etc.
  - Logical Services; turnkey Infrastructure, botnets, PoPs, exploited hosts, etc.
  - Physical Services; Shipping, Drops, Mules, etc.
- **Dark Markets**; drugs, weapons, humans, counterfeit, malware, etc.
- **Closed criminal interest groups**; technical, business, trust, etc.
- **Bullet proof** obfuscation of just about everything...



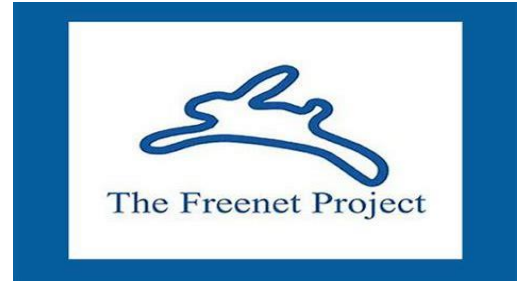
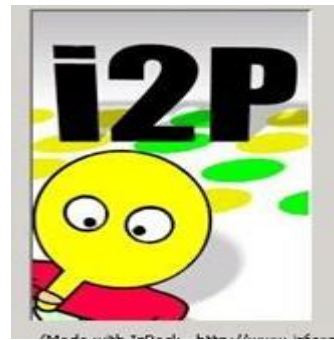
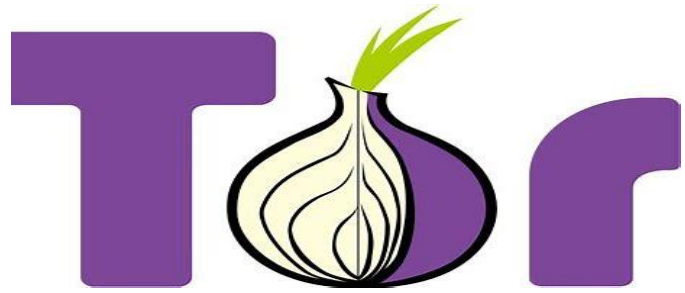


# Dark Net Versus Going Dark



- Dark Net is a logical environment...
- Dark Net
  - Dark community, communications, tools, services, and finances
  - Component of Criminal Underground
  - Component of the concept of Going Dark
  - Challenges Investigations due Anonymization

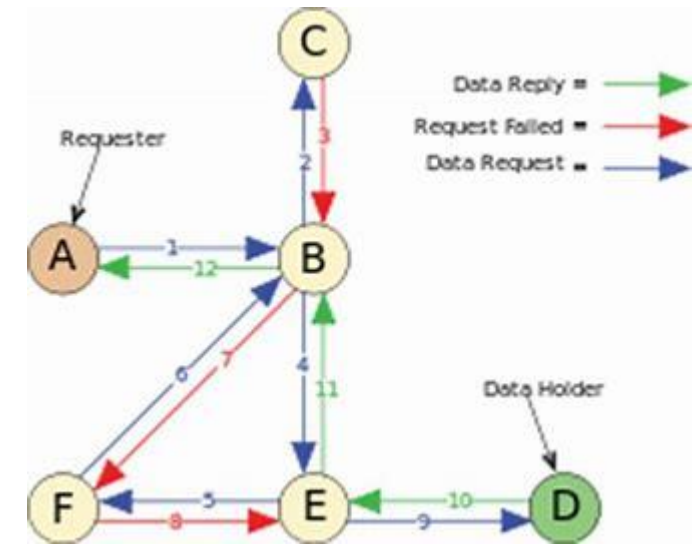
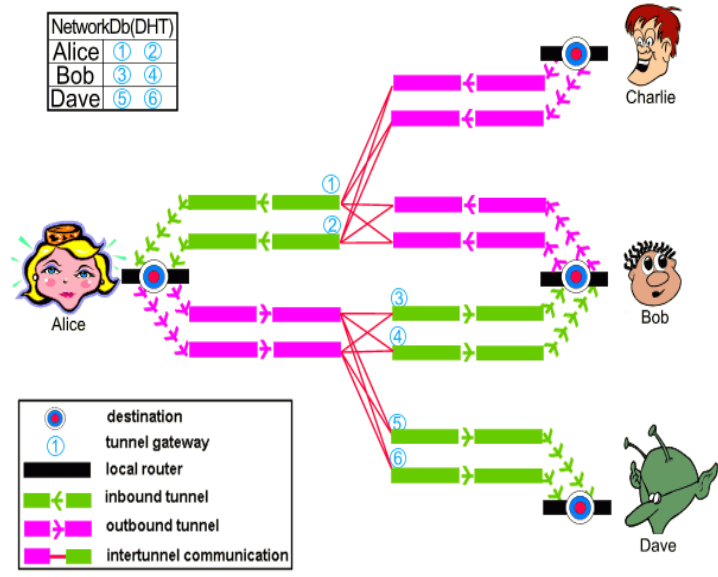
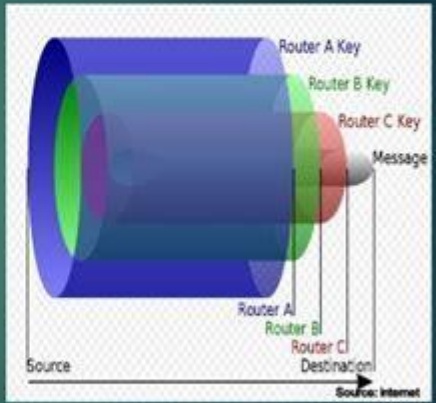
# Dark Net, Darker Net, Darkest Net...



## How it works ?

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- The user creates a "circuit" leading to their destination.
- At each hop, the node "unwraps" a layer from the packet via symmetric keys, revealing the next destination.



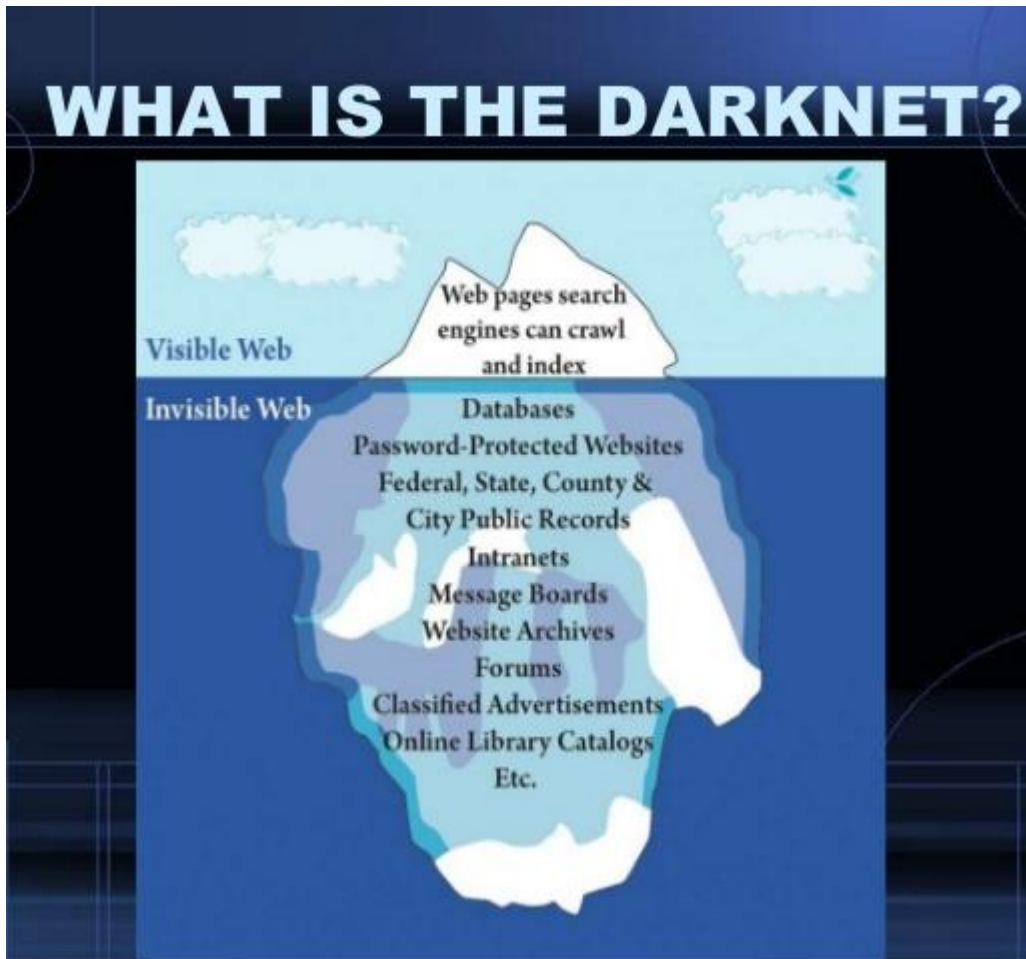




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# Dark Net, Darker Net, Darkest Net...



## THE DARKNET: The Underground for the Underground

### ACTORS

Those who lurk beyond the shadows of the Darknet

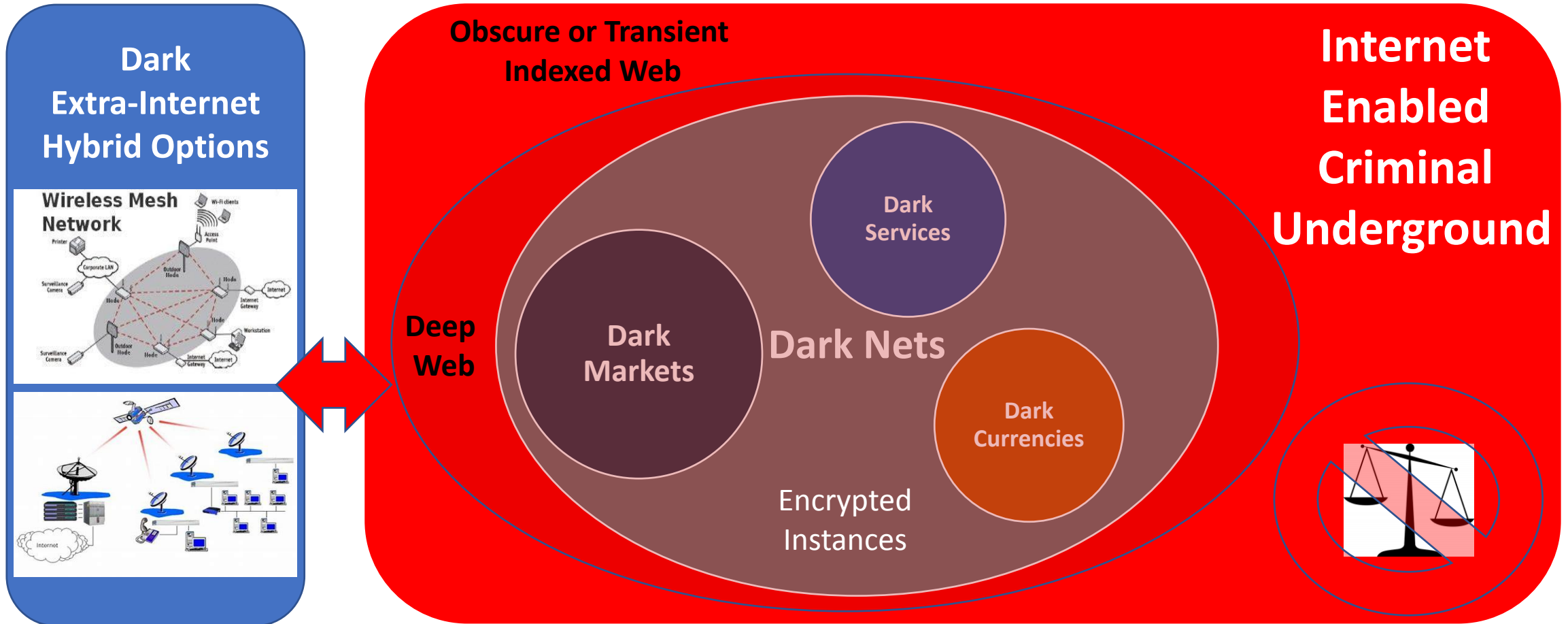
- Public**
  - Politically Oppressed
  - Socially Disenfranchised
  - Whistle Blowers
  - Illicit Product/Service Buyers
- Government**
  - Agencies
  - Contractors
  - Researchers
- Criminals**
  - Drug Cartels
  - Organized Crime
  - Human Trafficking
- xHATs**
  - Script Kiddies
  - White Hats
  - Gray Hats
  - Black Hats
- Terrorists**
  - Political Terrorists
  - Environmental Terrorists
  - Religious Terrorists

### CRYPTOCURRENCY

Greasing the wheels of the Darknet



# Dark Net, Darker Net, Darkest Net...



# Dark Net Versus Going Dark



- Going Dark is a logical phenomenon...
- Going Dark
  - Technological evolution; limiting or depriving legal access
  - Includes all forms of digital evidence; data and metadata
  - Technical, legislative, and business drivers
  - Much broader impact on criminal justice

# Going Dark Versus Access to Evidence



- Technical barriers to access
  - Legal barriers to access
  - Business barriers to access
- 
- Exceptional Access
  - Advanced Investigative Strategies
  - Large Data Strategies

# Going Dark Versus Access to Evidence



- Emerging Challenges...
  - “Legal Process – Resistant” Encryption by default as a Standard (Absence of Exceptional Access Mechanism both device and cloud)
  - “Legal Process – Resistant” Data storage Schemes
    - Shards, Motion, Space, P2P, Blockchain, etc...
  - Enhanced bullet proof services configurations
    - Stacking Services and Tools

# Dark Data Versus Mitigating Victimization



- Threat Data
- Victim Data
- Criminal TTP
  
- Need for Cyber COMPSTAT Approach...
  - Focus on Jurisdiction and Demographic
  - Focus on Practical Skillsets and Realistic Workflow





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## QUESTIONS?

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