Explosives Detection Canine Research

University Network Summit on Research and Education

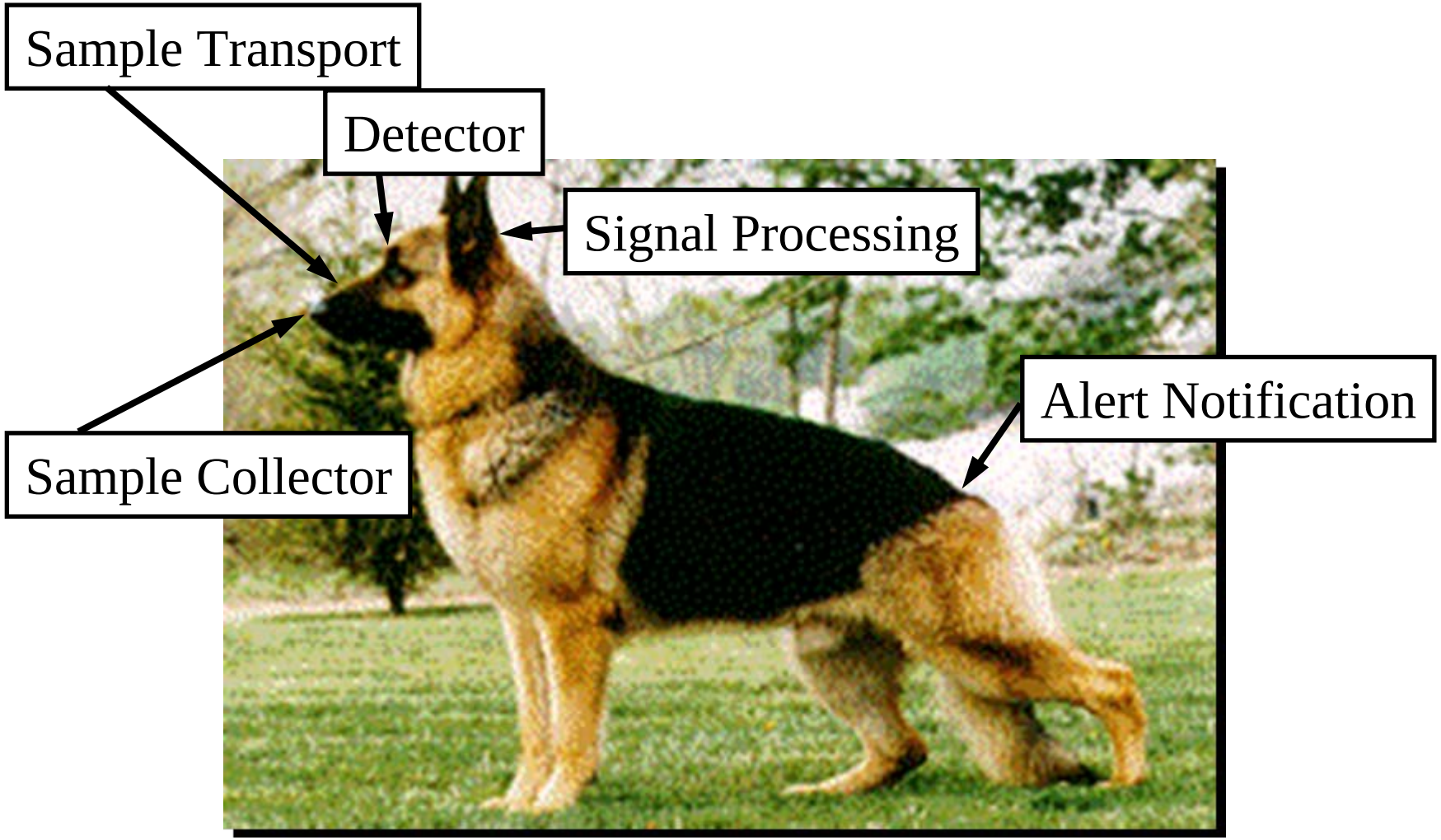
Washington, DC

March 16, 2007

Polly E. Gongwer, Ph.D.
Trace Explosives Detection
Transportation Security Laboratory
Explosives Division
Science and Technology Directorate
(609) 813-2759
Polly.Gongwer@dhs.gov

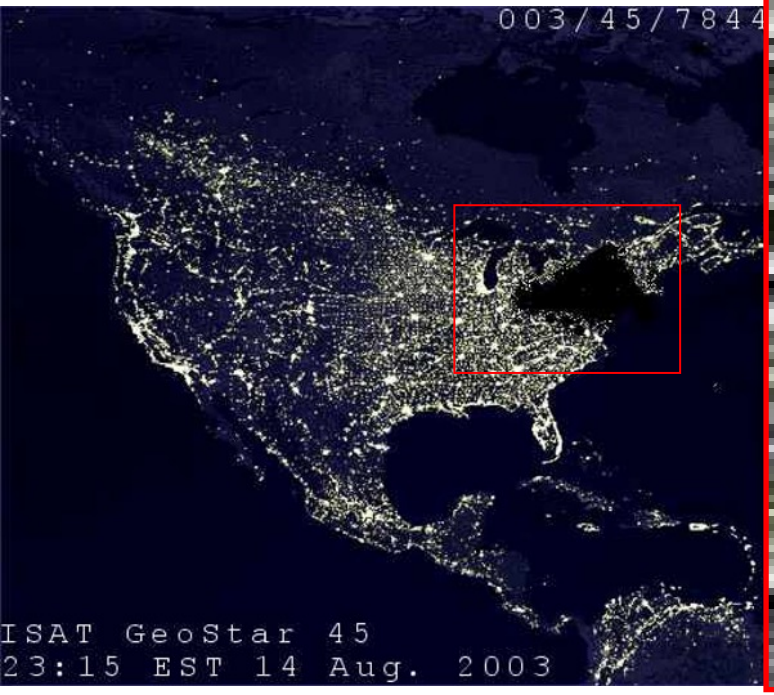
Homeland Security

Anatomy of a Detection System



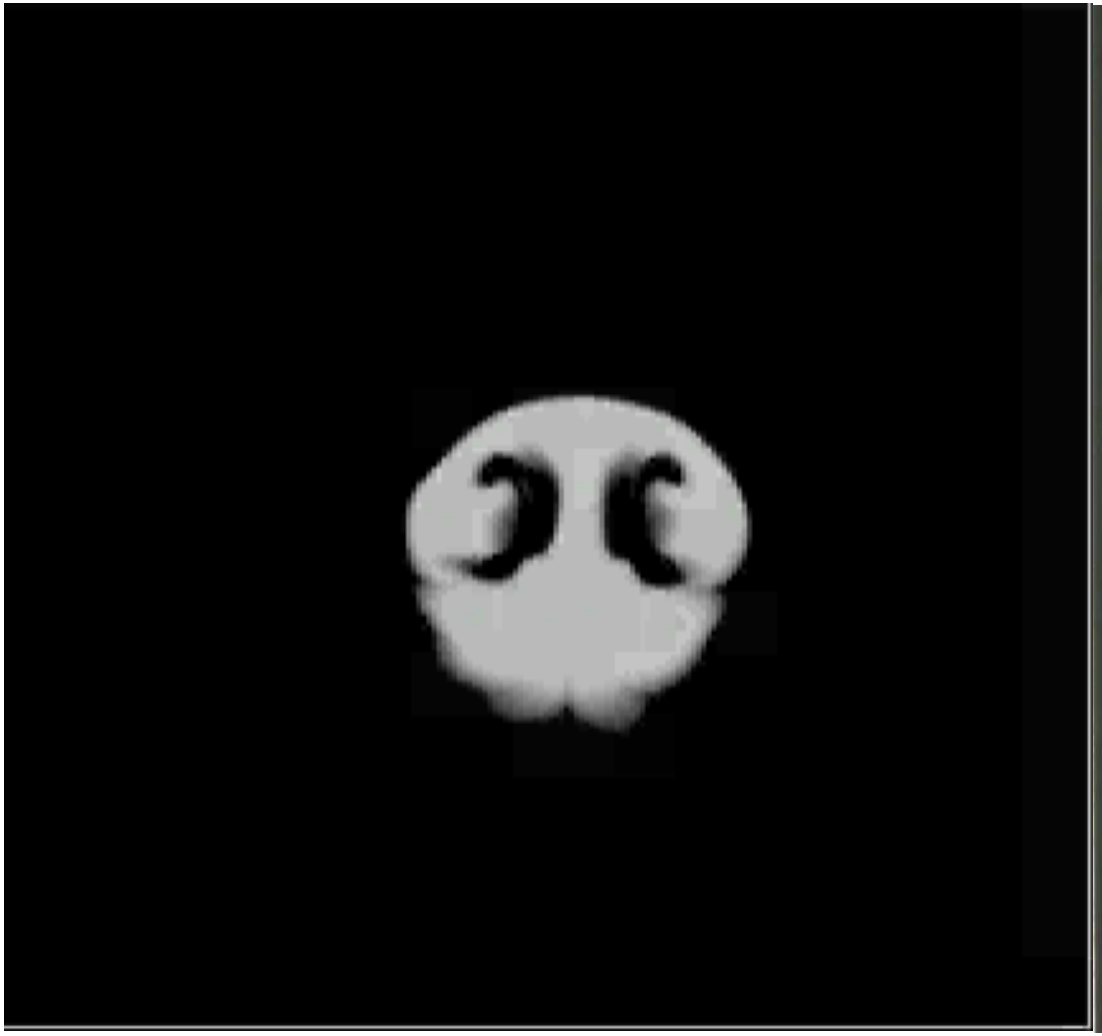
Homeland Security

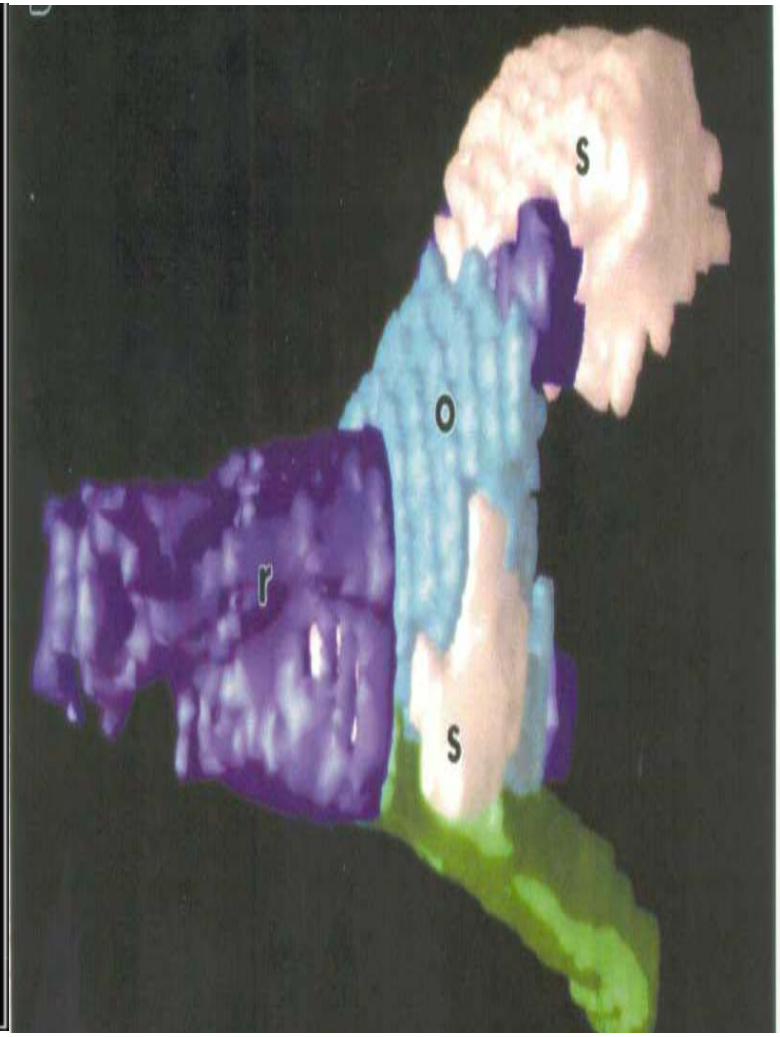
Dogs don’t require electricity



Homeland Security

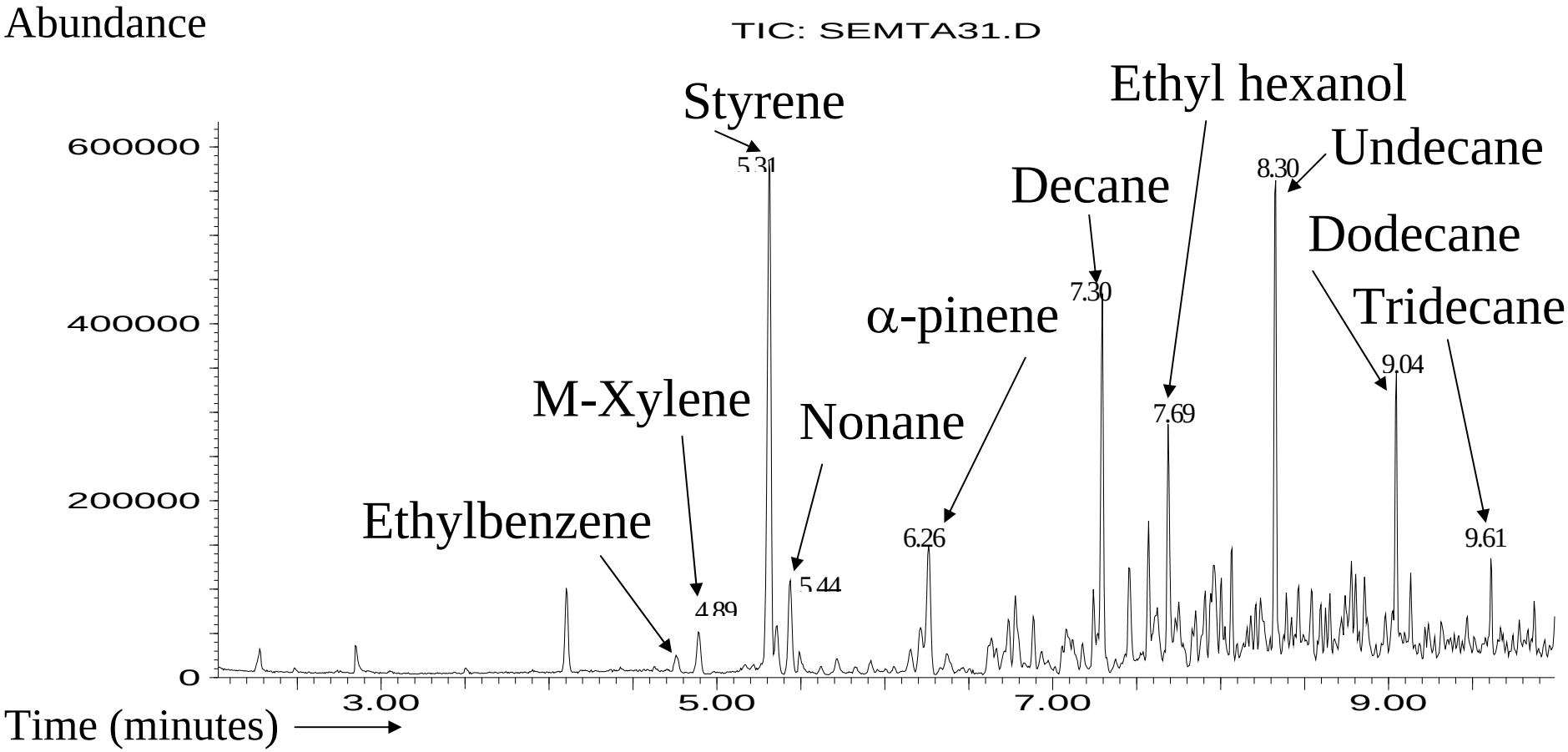
Sample collection and transport





Homeland Security

Semtex H Headspace Analysis



Develop Sensors for Orthogonal Detection

Homeland Security

Test Design Challenges

Homeland Security

Dogs can work to source

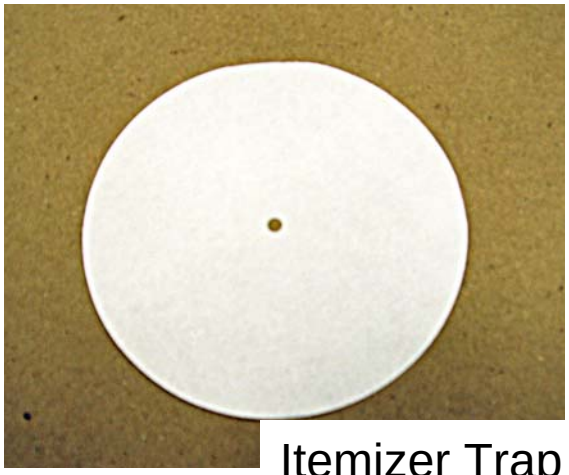
Homeland Security

Best Rearing Practices

Homeland Security

Trace Sampling

Itemizer Windows



Itemizer Trap

400B Swab

Ionscan 400B

400B sampling wand

Homeland Security

Homeland Security

Homeland Security