Introduction to Web Protection Library (WPL)

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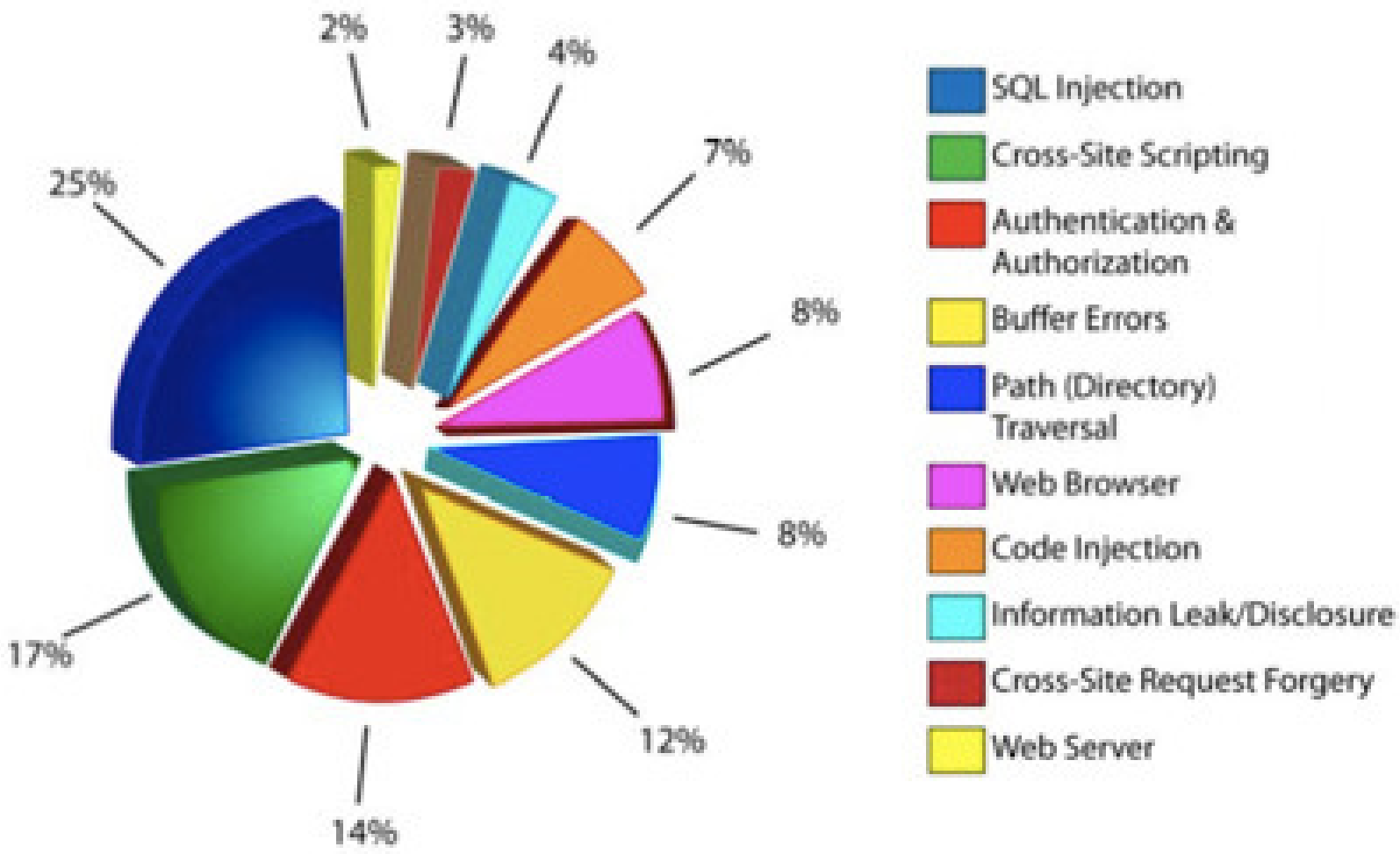
OWASP Top 10 - 2007

- A1. Cross Site Scripting (XSS)
- A2. Injection Flaws
- A3. Insecure Remote File Include (NEW)
- A4. Insecure Direct Object Reference
- A5. Cross Site Request Forgery (CSRF) (NEW)
- A6. Information Leakage and Improper Error Handling
- A7. Broken Authentication and Session Management
- A8. Insecure Cryptographic Storage
- A9. Insecure Communications (NEW)
- A10. Failure to Restrict URL Access

Top Vulnerabilities



Picture courtesy of http://www.net-security.org/secworld.php?id=8489.

Comprehensive Web Application Protection

Agenda

- Anti-XSS Library
- Introduction to WPL
  - Encoding Library
  - Security Runtime Engine
  - Configuration Engine
  - Extensibility
- Demo
- Questions?

What is Anti-XSS Library?

- Anti-XSS is an encoding library designed to help developers protect their ASP.NET applications from XSS attacks.
- It differs from most encoding libraries in that it uses the white-listing technique to provide protection against XSS attacks.
- Anti-XSS 3.1 introduced Security Runtime Engine (SRE)

Introduction

- Comprehensive web application protection
  - Security Runtime Engine
  - Encoding Library
- Does not require any code change
- Extensible framework for plug-ins
- Minimal Performance Impact

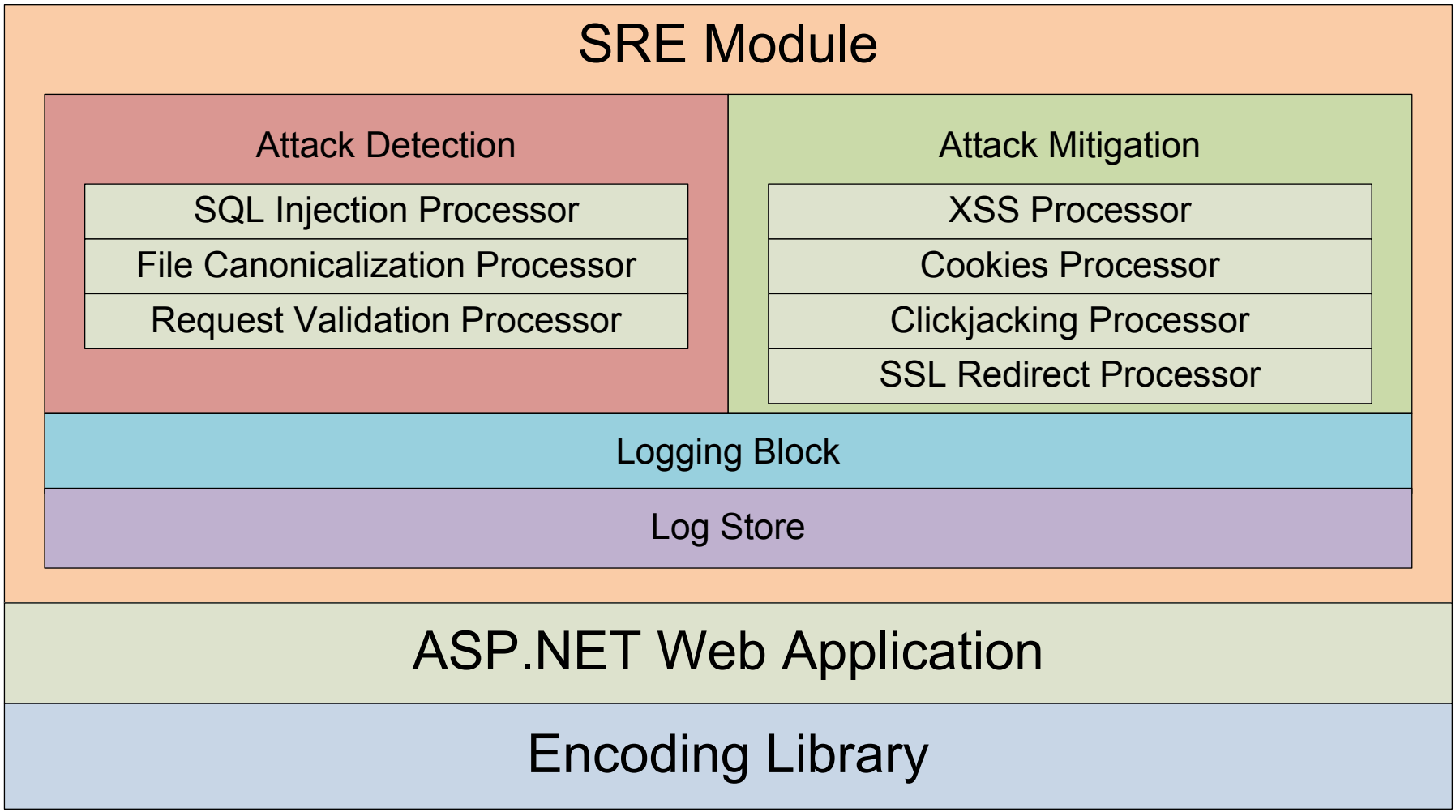
Features

- Encoding Library
  - HTML Encoding
  - HTML Sanitization
  - LDAP Encoding
  - Cascading Style Sheets Encoding
- Security Runtime Engine
  - Centralized Logging
  - Extensive Configurable Options
  - Comprehensive Attack Protection

Comprehensive Attack Protection

Attack Detections	Attack Mitigations
SQL Injection	Cross Site Scripting
File Canonicalization	Cookie Theft
Script Injections	Clickjacking
	Information Disclosure

Architecture



Demo

Extensibility

- Abstract Classes for new processors
- Extensible Configuration Base Classes
- Configuration UI Attributes
- Asynchronous Log Writer
- Included Samples in Final Release

Release Timeline

- November 1st week
  - Encoding Library Updates
  - Extensible Framework for Processors
  - XSS and SQL Injection Protection
- February 1st Week
  - Cookies, SSL, Clickjacking, Request Validation Processors
- March 1st Week
  - Help
  - Sample Code
  - File Canonicalization Processor

Call to Action

- You can register for our program at Connect and can download the tool directly
- https://connect.microsoft.com/Downloads/DownloadDetails.aspx?SiteID=734&DownloadID=23329 – WPL 1.0 CTP

Other Security Tools

- CAT.NET 2.0 CTP
  - Ported to the Phoenix compiler infrastructure
  - Shiny new configuration rules engine that look in the *.config for common security mis-configurations
  - This CTP is a command line only single-pass data flow engine and configuration rules engine.
  - Will fully integrate the tool into the Code Analysis menu of Visual Studio 2010.
- https://connect.microsoft.com/Downloads/DownloadDetails.aspx?SiteID=734&DownloadID=23328

Other Security Tools

- WACA 1.0 CTP
  - Web Application Configuration Analyzer.
  - Over 100 security rules in total (many more in the final release)
  - IIS / .NET / SQL Server Security Configuration
  - Windows Permissions
  - Generate HTML based report, export results to Excel and export findings as work items to TFS
  - Scan a machine remotely (Requires WMI and Remote Registry)
- https://connect.microsoft.com/Downloads/DownloadDetails.aspx?SiteID=734&DownloadID=23330

Questions?