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Edge Mashups for Clinical Collaboration

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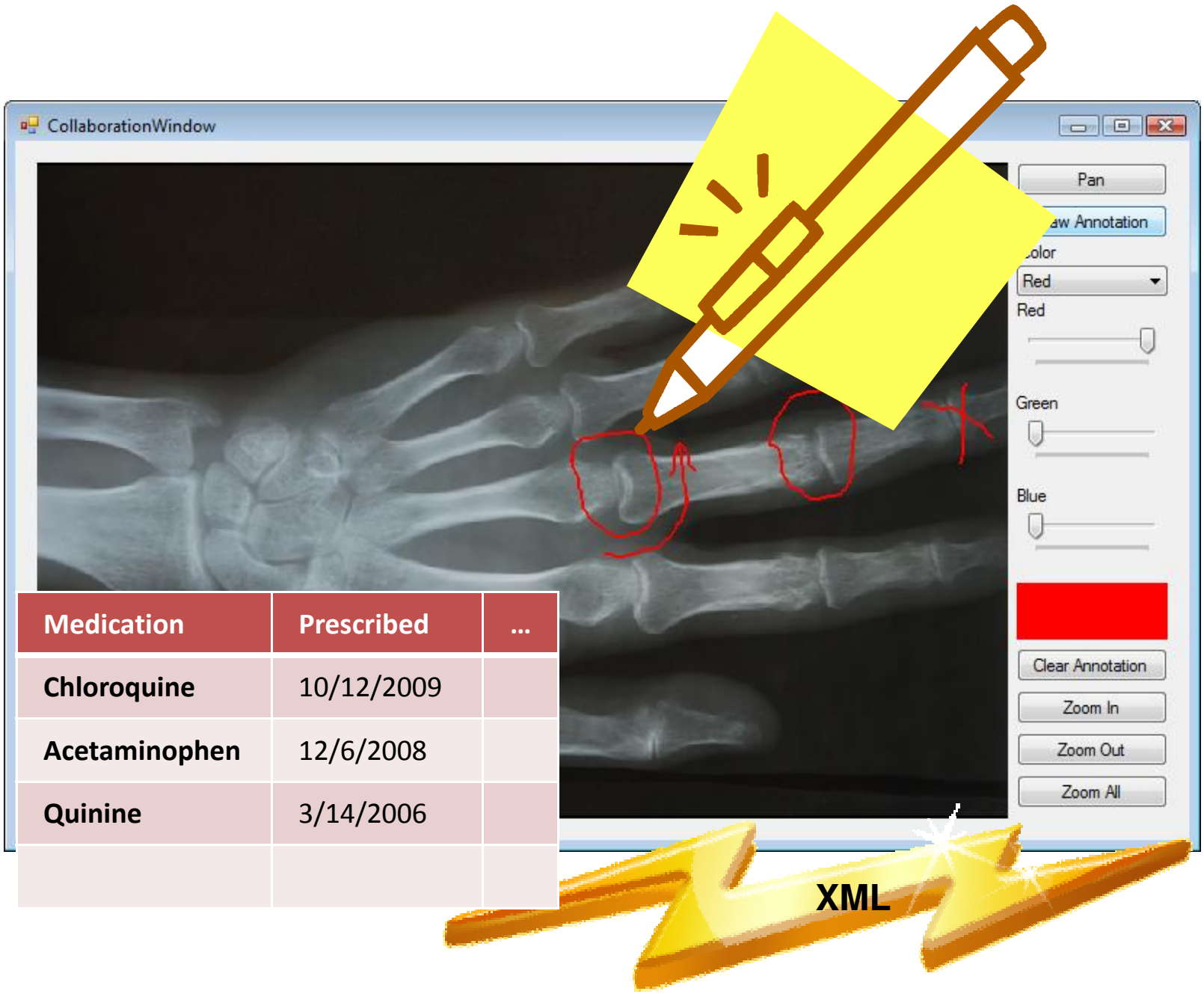
Edge Mashups for Clinical Collaboration

- **Platform objective:** empower non-programmers to build applications for real-time collaboration
- **Research challenges:** share information in a federated environment while providing accountability through HIPAA compliant access logging and data retention

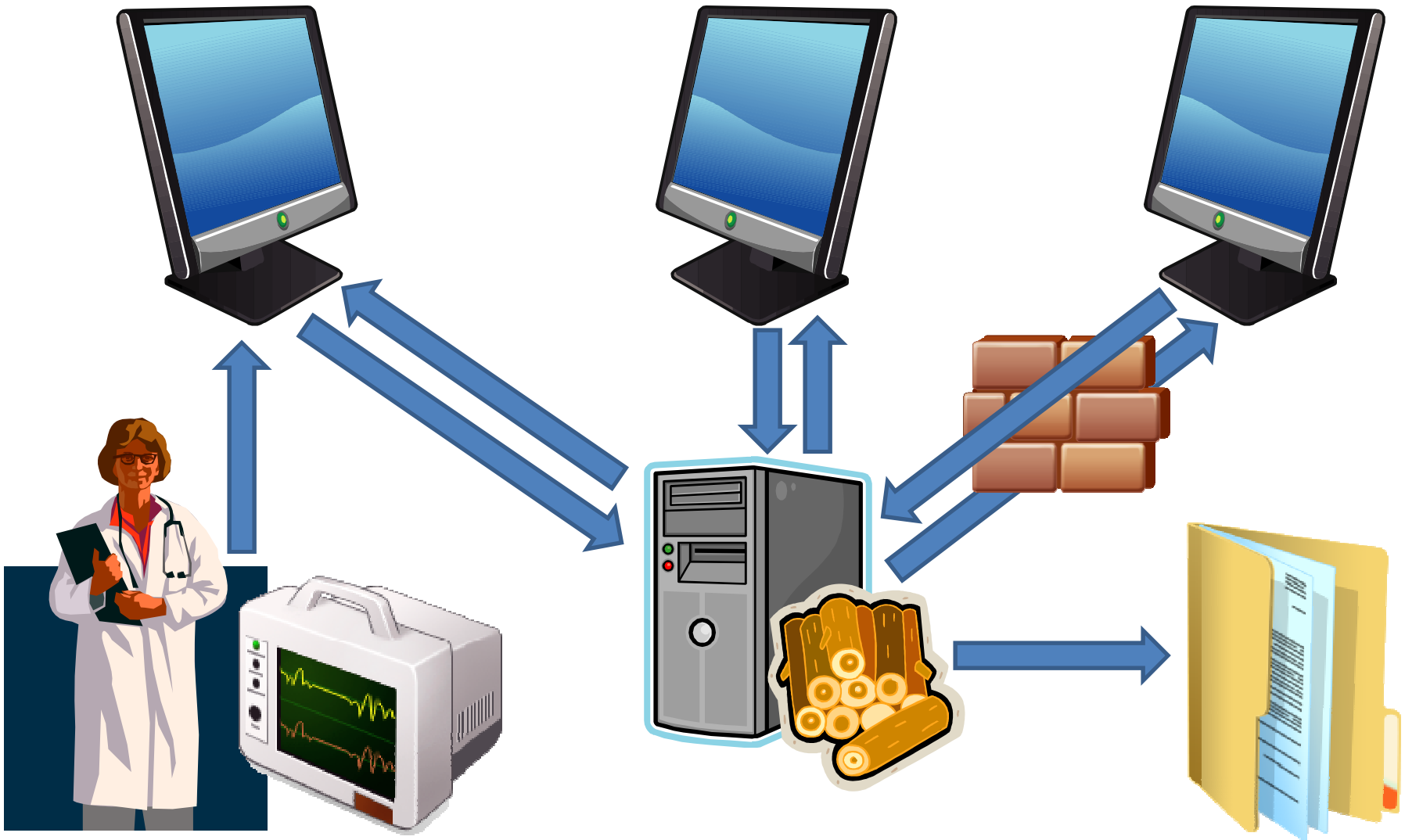
Example use-cases

- Expert-assisted surgery
  - Can call a remote expert for advice if complications arise
- Micro-clinics
  - Nurses present on-site
  - Doctors write prescriptions remotely
  - Improved decision making before sending patient to a specialist



Medication	Prescribed	…
Chloroquine	10/12/2009	
Acetaminophen	12/6/2008	
Quinine	3/14/2006	

Architectural Overview



Platform Capabilities

- Data privacy and auditability
  - Break-the-glass access control
  - Log appropriate checkpoints of application state
- Low latency to maintain interactive look and feel
  - Simultaneous updates from multiple workstations, while keeping views consistent enough for auditability
- Hosting medical applications in the cloud
  - Generic server to facilitate arbitrary applications
  - Move application logic dynamically between the workstations and the cloud
  - Scale to large deployments