Cloud Apache OpenOffice Based on HTML 5

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Agenda

- Speaker Introduction
- Tremendous Opportunities from Increasing Users of Mobile Devices
- Cloud AOO to Increase the Market Share
- Benefits of the Approach
- Existing Challenges and Possible Enhancements for the Future
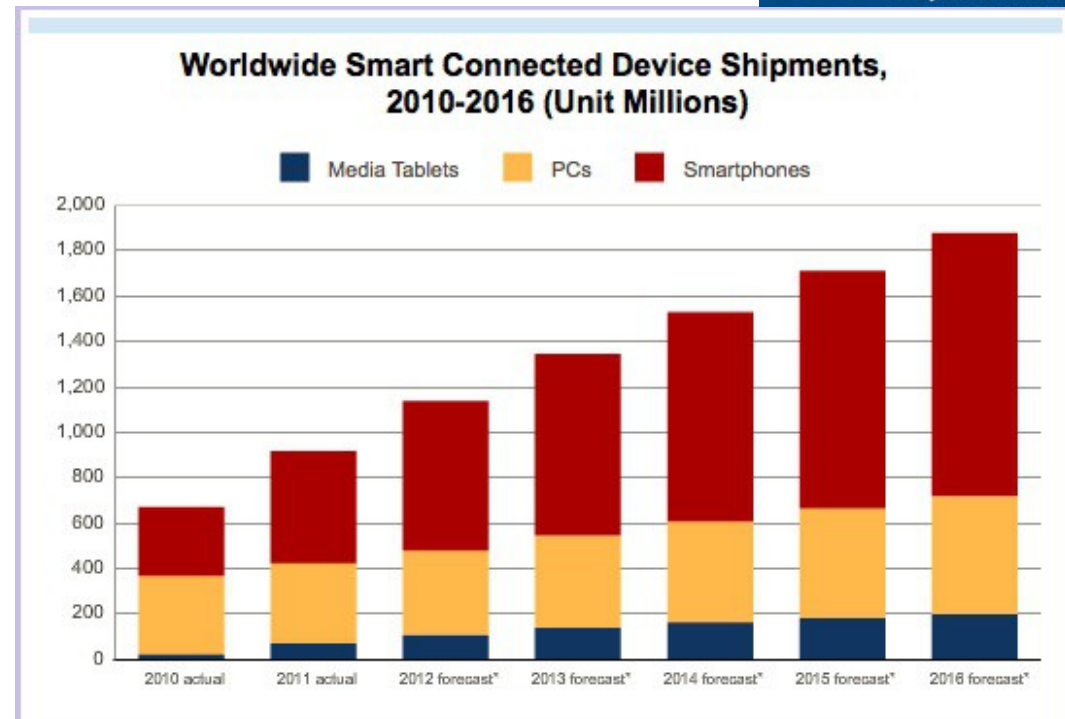- Q&A

Speaker Introduction

- ## Jian Hong Cheng
    - Symphony Documents Team Leader
    - AOO Writer, MS Word Binary Fidelity, …, Developer
    - Former AOO PPMC Member, Stay Foolish
    - Beijing China

- ## Fan Zheng
    - Symphony Documents Team Member
    - AOO Writer, MS Word Binary Fidelity, …, Core Developer
    - AOO Committer, Stay Hungry for Technologies
    - Beijing China

Tremendous Opportunities from Increasing Users of Mobile Devices

- Statistical Report from IDC
  - 2011: About 1,000 Million
    - Windows PC(x86 Compatible CPU) : 35.9%
    - Android (ARM CPU) : 29.4%
    - IOS : 14.6%

  - 2016: About 1,800 million
    - Windows PC
      (x86 compatible CPU) :25.1%
    - Android (ARM CPU) : 31.1%
    - IOS : 17.3%

IDC Analyze the Future

Worldwide Smart Connected Device Shipments, 2010-2016 (Unit Millions)

Legend: Media Tablets | PCs | Smartphones

Chart x-axis: 2010 actual, 2011 actual, 2012 forecast*, 2013 forecast*, 2014 forecast*, 2015 forecast*, 2016 forecast*

Chart y-axis: 0 to 2,000

Cloud AOO to Increase the Market Share

- Brief Introduction of the approach
  - Run AOO under a cloud environment as a service
  - Access AOO through a web browser
  - The UI of AOO will be transformed and presented within the client's web browser
  - 'View', 'Operate' and 'Edit Content'
    - E.g., locating cursor, inputting characters, selecting content for deletion or change of properties within web browser

- Main technical composition
  - AOO+Web Server+XML+HTML+JS+Dojo
    - AOO: AOO Professional UNO
    - Web Server: Apache Tomcat 7.0.26
   - XML: XML
    - HTML and JS => HTML5

Cloud AOO to Increase the Market Share

• Architecture
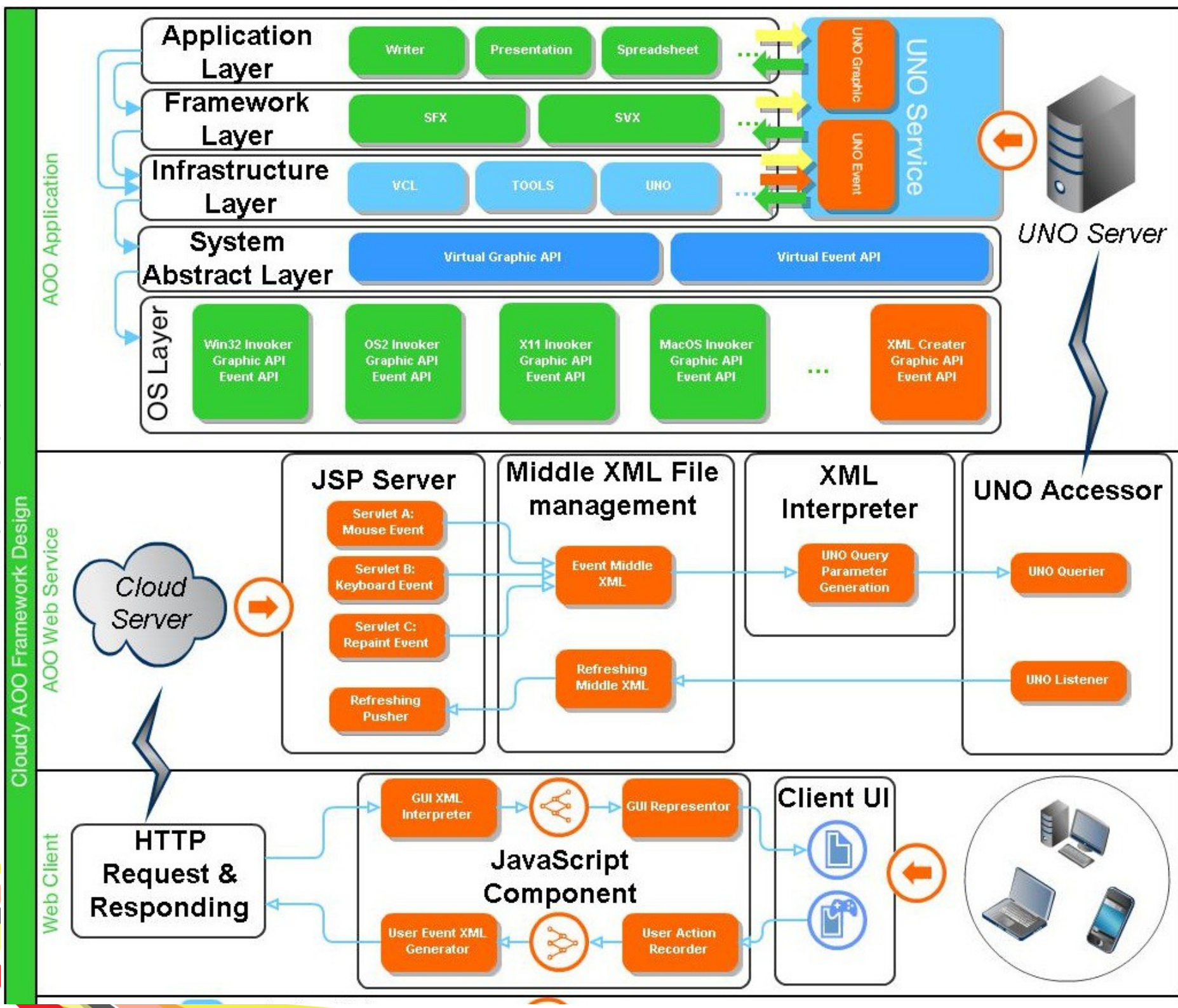
Cloud AOO to Increase the Market Share

- "UNO Graphic" and "UNO Event"
  - "GUI and Event APIs" are responsible for handling the user events (Mouse, Key and Refresh) and locating the actual positions within AOO

- "XML Creator, Graphic API and Event API"
  - Generate the middle GUI XML files that describe the UI, contents and layout in AOO
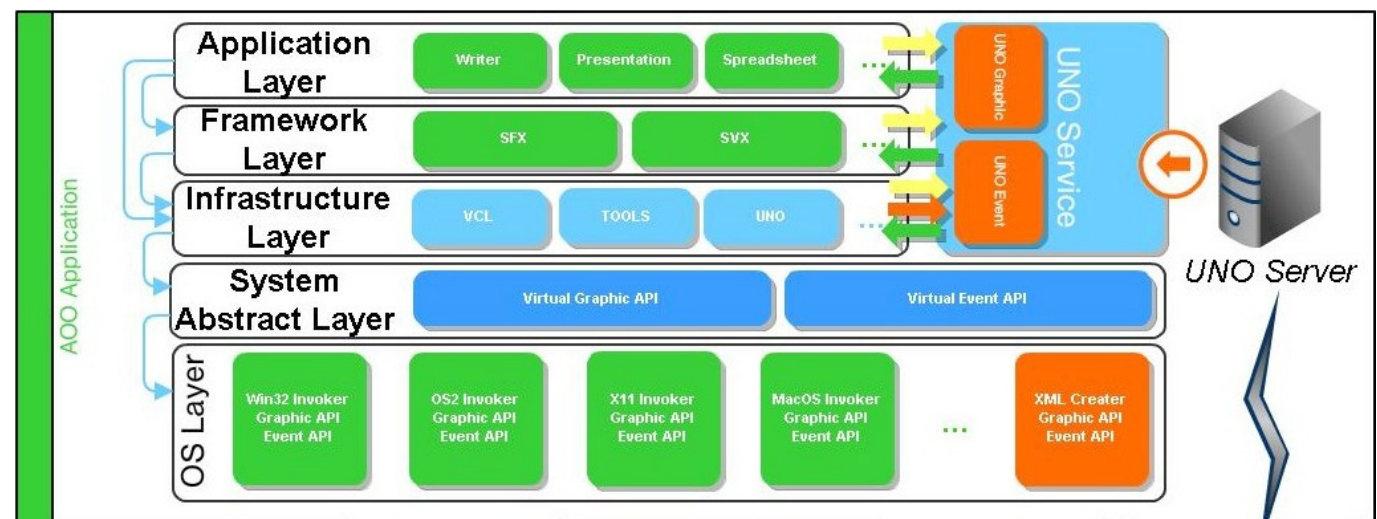
Cloud AOO to Increase the Market Share

- ## Detail Introduction II of the Architecture

  - "GUI XML Interpreter"

    - Parse the UI info, contents and layout info recorded in the XML files
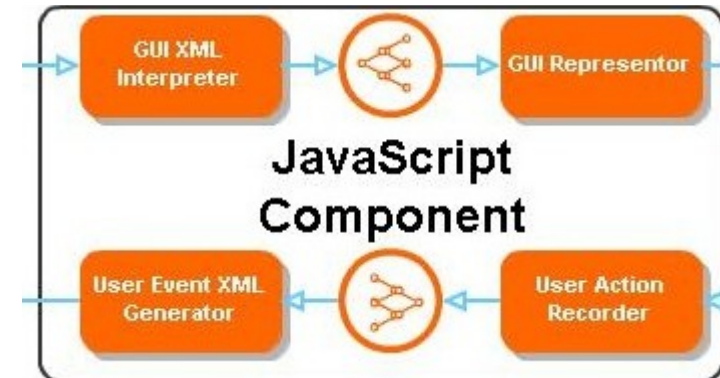
  - "GUI Representor"

    - Render the UI, contents and layout parsed from XML files to ensure the same contents and layout in AOO

  - "User Action Recorder"

    - Record the behavior of end users, such as the mouse, keyboard, refresh and so on

  - "User Event XML Generator"

   - Generate XML files to describe the recorded user events

Cloud AOO to Increase the Market Share

- ## Detail Introduction III of the Architecture
  - – "Servlets A, B and C"
    - Transact the mouse event, keyboard, refresh and results respectively to AOO
  - – "Event Middle XML"
    - Manage the middle XML files, such as add, delete and so on
  - – "UNO Query Parameter Generator"
    - Translate the mouse event, keyboard, refresh and results to what they should be in AOO and generate the parameters for calling APIs of AOO
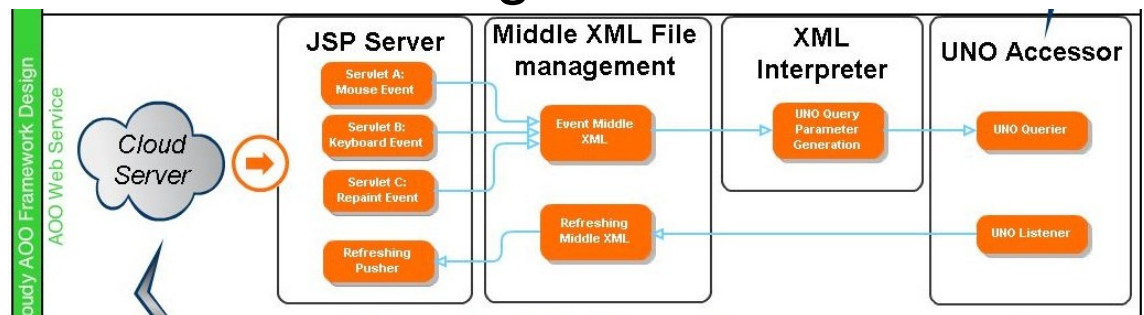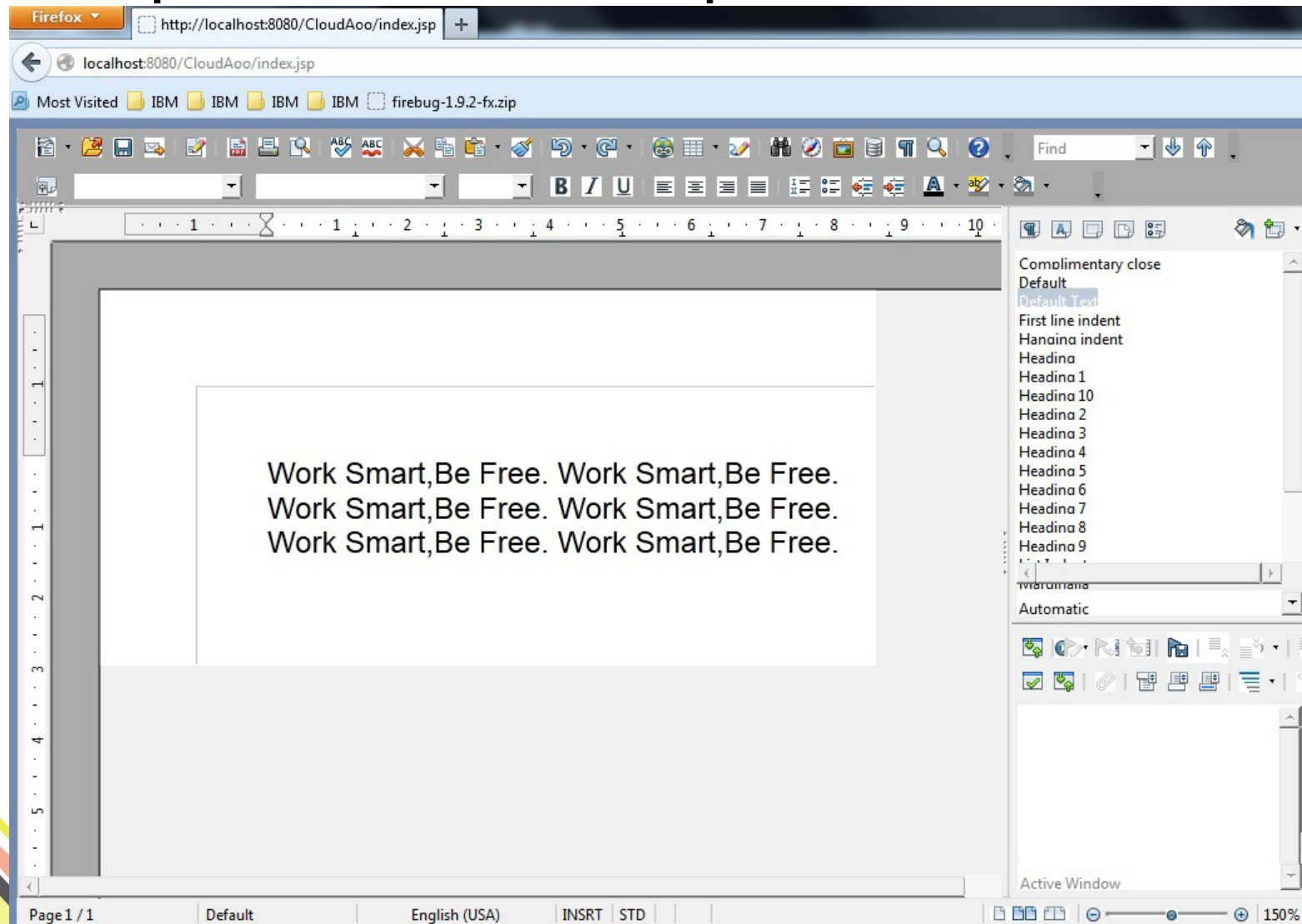
Cloud AOO to Increase the Market Share

- Sample for the POC - presented in AOO
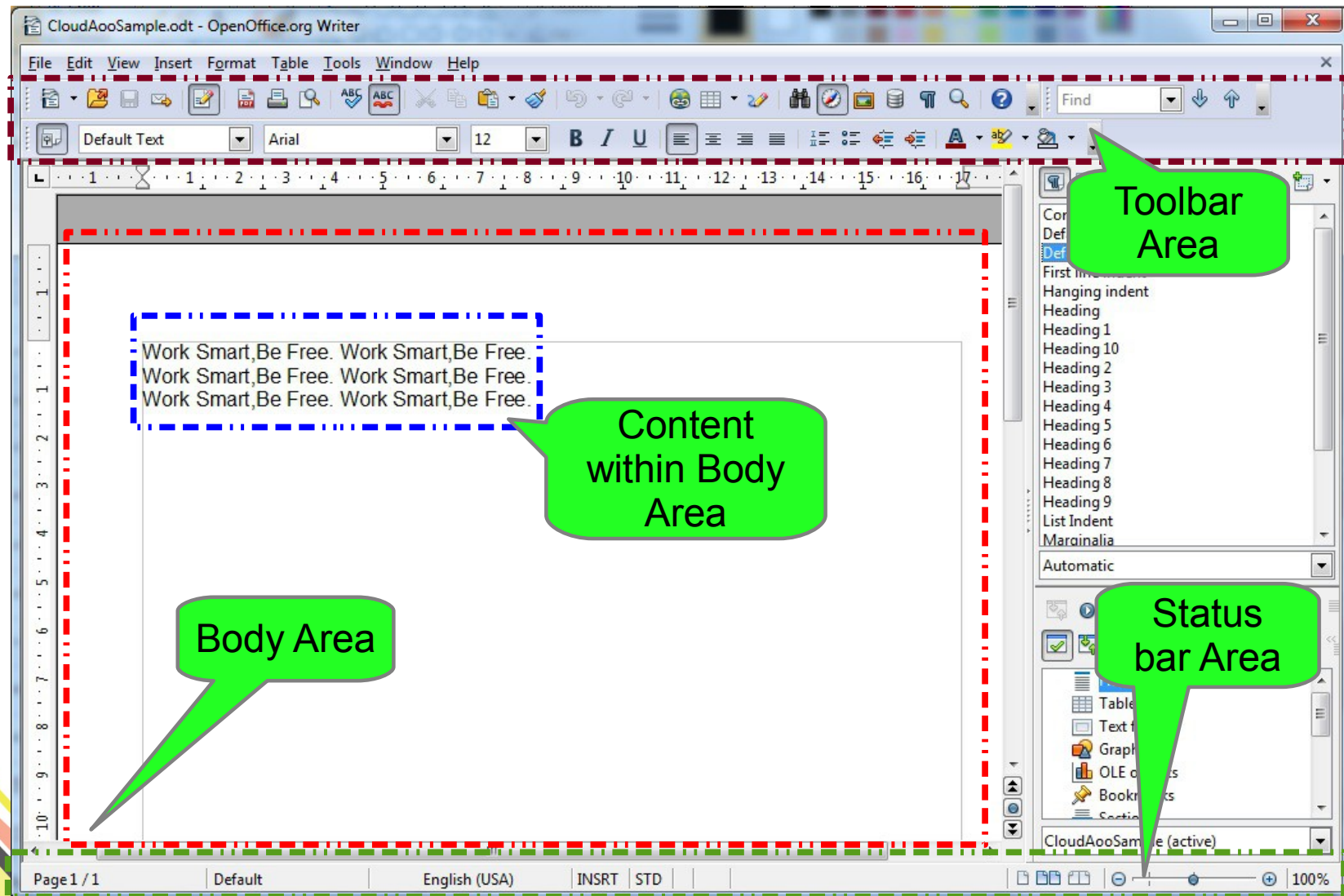
Cloud AOO to Increase the Market Share

- Sample for the POC - presented in web browser

Cloud AOO to Increase the Market Share

- Sample for the POC - Partial XML of Body Area

Cloud AOO to Increase the Market Share

- Sample for the POC - Partial XML of Toolbar

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Cloud AOO to Increase the Market Share

- Sample for the POC - Partial XML of Status Bar

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Benefits of the Approach

- This approach would extend the deployment of AOO to mobile devices enabling users to adopt AOO as their document handling tool

- This approach would have just a small impact on AOO, and would get win-win with it

- No platform dependent UI presentation in AOO as the UI presentation would be processed in the web browser

- This approach would support a deployment of AOO in cloud and social environments

Existing Challenges and Possible Enhancements for the Future

- Existing Challenges
  - The AOO process can not be shared and each end user will have his/her own process when accessing AOO through web browser
  - The performance of rendering may have issues because the Web browser is responsible for that and there is existing a bridge connection
  - The UI presentation part of AOO needs to be XML-Based

- Possible Enhancements for the Future
  - Translate the UI style and user experiences to align with the specific ones on the OS of the mobile devices

Q&A

Thanks!