Aspect Financials 360° Features

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1. INTRODUCTION

The purpose of this document is to outline the features of Aspect Financials 360° (herein abbreviated as AF 360) developed by Angle Dimension using the latest web-based technologies. AF 360 is a modular system and it is comprised of the following modules: AF 360 Core, AF 360 Customer Portal, AF 360 Interface Ready, and AF 360 Reports Customisation Manager. These modules are detailed in the section titled *AF 360 Modules*.

Some of the information presented is taken from the perspective of normal system users, and there are sections that highlight the technical capabilities of AF 360. The information in this document pertaining to the features present in AF 360 might change between the time this document is published and the system is live on your premises, but great effort will be undertaken to ensure that all features presented in this document are available in the system.

Disclaimer: This system is developed and owned by Angle Dimension, any enquiries pertaining to AF 360 and its related works should be made directly to the company.

2. OVERVIEW

AF 360 addresses the information management needs associated with Microfinance Institutions and Financial Cooperatives especially in Malawi through the use of internet technologies and its derivative innovations.

While MFIs are striving to competently provide their credit, savings, and various financial services and products to people lacking access to traditional core banking services, they are faced with the challenges of effective and efficient information management which drives business expansion, offers sufficient servicing of existing membership/customer base, as well as increases the number of new customers and members. Known industry challenges include continued existence of error-prone manual or semi-automated processes, unavailability of suitable applications, high costs of solutions for the institutions and lack of measures on risk assessment and impacts for the institutions and the industry as a whole.

With the advent of technology, MFIs are placed at an advantage of adopting affordable, accessible, and innovative management information systems (MIS) that bring varying benefits ranging from loan tracking to greater transparency and risk management. However MFIs are now faced with challenge to acquire and manage off-the-shelf systems for information processing, gearing up financial stability, increasing performance and achieving proper management of flow of funds.

AF 360 offers a suite of functionalities that are affordable and applicable to the whole Microfinance industry. It provides a unique, ubiquitous standard platform that supports the needs of MFIs and Financial Cooperatives, assisting them in their provision of accessible and affordable diverse services and product packages that they offer to improve the effectiveness of their information management, as well as enhancing efficiency in the general operations of the institutions through process streamlining in order to achieve growth and improved reporting and accountability in a cost efficient manner.

3. AF 360 MODULES

AF 360 suite is a collection of sub-subsystems designed to achieve different business functions and these can be purchased separately to meet your budget lines. The following are modules that AF 360 is comprised of:

- AF 360 Core
- AF 360 Customer Portal
- AF 360 Interface Ready (Payroll, Mobile-money & National Payment System)
- Reports Customisation Manager

AF 360 is available in 2 editions selectable by customers depending on their requirements. The following is a listing of each edition and its features:

Item Description	Editions	
	Professional	Enterprise
AF 360 Core	✔	✔
AF 360 Customer Portal	✘	✔
AF 360 Interface Ready	✘	✔
AF 360 Reports Customisation Manager	✔	✔
Maximum User Licences	To Be Agreed	To Be Agreed

4. AF 360 CORE

4.1 CLOUD-READY APPLICATION

A great number of Financial Cooperatives or MFIs face challenges of ICT infrastructure and management which sometimes proves costly thereby limiting them to carry out automation of business functions enabling better data analysis, decision-making, and reporting. In order to address such challenges AF 360 can be installed and accessed on premise or hosted in the cloud which only requires internet connectivity and maintenance fees for the hosting company. Some of benefits of cloud-ready approach include the following:

- Staffing on ICT is not required thereby saving Financial Cooperatives/MFIs money. All ICT staff management and operations is done by hosting company
- Data backup is managed by the hosting company
- Your Financial Cooperative/MFI can be up and running within minutes as the application and database infrastructure and resources are already available
- Data is always segregated

AF 360 offers two modes in cloud implementation:

- Multiple Application & Database Instances Mode: this mode allows different Financial Cooperatives/MFIs to have their own application and database instances created. If one of the Financial Cooperative/MFI instances are down, it doesn't affect the others
- Multi-Tenancy Mode: this is whereby a single application and single database manages multiple Financial Cooperatives/MFIs with data segregation employed (with an aid of automated complex data segregation engine available in the system

Cloud-Ready system parameters should be properly configured basing on your implementation preferences.

4.2   GENERAL LEDGER & ACCOUNTING

AF 360 is geared to handle accounting for internal accounts referred to as General Ledger Accounts in our terminology or commonly known Chart of Accounts (COA) which are used for posting transactions. These accounts are systematically classified by account number (also referred to as the GL Code), description of the account, and the type of account depending on the nature of transactions it will handle. They determine the movement of funds and how they are used. The system is designed to support any sub-categorization of accounts as per accounting standards used by the implementing institution. However, the following is the default general categorisation of accounts in the system:

- Assets
- Liabilities
- Income
- Expenditure
- Equity/Capital

The depth of COA is unlimited basing on organization's business rules in place and AF 360 is designed to handle this complexity without any hassle

AF 360 was designed with **Organisation – Branches** structure in mind that entails that the same GL Account defined will be reporting difference balances at branch-level with multi-currency if preferred and if reports are required at company portfolio, aggregation is performed automatically by the system simplifying reporting to end-users.

There are also other several features embedded to this module such as:

- *GL Account Watch:* GL accounts can be tracked so that if a certain balance value has been modified an email/SMS is sent automatically to the organisation's superiors. This can minimize fraud activities performed to suspense accounts

- *Closure of GL Account:* GL accounts can be closed at branch level or organisational level and no single transaction will be passed against that account

4.3 PRODUCTS

There are a range of services offered to customers by Financial Cooperatives/MFIs such as current accounts, savings accounts, fixed deposits, loans etc. and each carries its own benefits which a customer will choose from. AF 360 is designed to handle various products as detailed in this section:

4.3.1 CASA Products

In order to serve the customers in need of either current or savings accounts for various reasons, some product service parameters needs to be configured in the to assist the system to generate automatic GL entries for product transactions. The areas of configuration are as follows:

- Product Definition: this feature allows user to define service parameters for CASA products being offered which includes specifying product code, product name, overdraft facility if allowed, overdraft limit amount, book/account minimum balance, ATM max withdraw amount, POS max withdraw amount, cheques if is allowed, etc. These products will be linked with CASA accounts
- Product Accounting Rules: this feature allows users to define how the system should automatically post to GL accounts when front-office users are transacting. For example, if the user is capturing cash deposit, which GL account balances should be affected; and also, only transaction types having rules defined will be available during transaction posting
- Product Charges: this feature allows the users to define charges associated to a product i.e. monthly charges (ledger fees) fees and either the charge is mandatory to create during account opening process or not
- Product Charge Accounting Rules: this feature allows users to define how the system should post to GL accounts when a charge frequency has been reached
- Product Interest Rules: this feature allows users to define credit/debit interests associated to the product. If the product does not attract any interest then there is no need to create any interest rules
- Product Interest Accounting Rules: this feature allows users to define how the system should post to GL accounts when interest frequency has been reached

4.3.2   Shares Products

This module offers creation of products associated with shares that customers have subscribed to, and this is only applicable to customer shares accounts. If your organisation offers this service, this has to be defined as follows:

- Product Definition: this feature allows users to define service parameters for share products being offered which includes specifying product code, product name, monthly contribution amount, tax rate etc. These products will be linked with customer share accounts
- Product Accounting Rules: this feature allows users to define how the system should automatically post to GL accounts when front-office users are transacting. For example, if the user is capturing cash deposit, which GL account balances should be affected; and also, only transaction types having rules defined will be available during transaction posting
- Product Dividend Accounting Rules: this allows the users to define how the system should automatically post net amounts calculated during dividend payment process to GL accounts
- Product Tax Accounting Rules: this features allows users to define how collected tax amounts from dividend payments should be posted to GL accounts and this is only applicable to product with taxation rules defined

4.3.3   Loan Products

This module offers creation of loan products and defines the loan services provided to customers.

- Product Definition: this feature allows users to define loan product with different parameters that includes product code, product name, calculation method (simple interest, compound interest or amortization), period, interest rate, etc.
- Product Accounting Rules: this feature allows users to define how the system should post these entries associated to various events (i.e. loan amount disbursement, maturity, roll-over) to GL accounts:
  - o Accrued Interest
  - o Interest Earned
  - o Principal Amount

4.3.4   Deposit Products

In this section, focus is on provided to customers. This module offers creation of deposit products and defines the deposit services i.e. fixed deposits, recurring deposits provided to customers.

- <u>Product Definition</u>: this feature allows users to define deposit services with different parameters that includes product code, product name, calculation method (simple interest, compound interest or amortization), tenor, interest rate, tax rate, etc.
- <u>Product Accounting Rules</u>: this feature allows users to define how the system should post these entries associated to various events (i.e. invested amount/principal, maturity, roll-over) to GL accounts:
  - o Accrued Interest
  - o Interest Earned
  - o Principal Amount

4.4 CUSTOMERS

This module manages basic customer information for individuals/groups of individuals being registered in the system, and any CASA account, loan, fixed deposit etc. that is linked to each specific customer. Some of the information captured for customers is:

- Personal details
- Authorised Signatory details
- ID Photos
- Next of Kin details
- Payment Options (remittance through the bank, mobile-money or cash in on counter)
- Mobile-Money Wallets
- Group Members
- Bank Pay-Point details
- Employment details
- Company Directors etc.

A customer in the system can be an individual, club, etc. and the nature of a customer determines what information to capture.

There are supporting features to this module to ease data entry process and these need to be maintained before customer creation:

- Customer Groups
- Customer Identification Types
- Customer Marital Statuses
- Customer Registration Status
- Customer Relationship Types
- Customer Statuses
- Customer Types etc.

4.5 CASA ACCOUNTS

AF 360 offers this module functionality where customer account information is collected and managed. These accounts can be categorised as Current Accounts and Savings Accounts abbreviated as CASA, and it doesn't imply that all these services have to be offered by a single entity but rather depends on their preferences

The following are some of the operations available under this module:

4.5.1 Account Management

This module offers features of CASA account administration and management such as account creation, account closure, linking authorised signatories, defining any changes required etc. The account is linked to CASA product to inherit some parameters i.e. book/account minimum balance, accounting entries etc.

An account can be created with any currency denomination i.e. USD, MWK, and EUR and the system will use current exchange rates when processing deposits and withdraws, and an account number is automatically generated that is comprised of [branch code] [customer id] [account category number] [two check digits] e.g. *00134004514056*.

A loan or deposit contract requires a CASA account for settlement of cash disbursement, repayment etc. and this helps the system to properly remit funds to different payment channels like bank EFT, mobile money

4.5.2 CASA Categories

In order to properly manage accounts in the system, it supports account categorisation to clearly separate savings accounts and current accounts for better reporting. This also assists in account number creation through category number

4.5.3 Batch Posting

This module is designed to allow front-office users to capture deposit and withdraw transactions grouped by batch number. Note that GL account balances are not affected when transacting but only during batch/transactions authorisation

4.5.4 Transactions Authorisation

This module offer authorisation at batch level or transaction level and GL account balances will be effected marking that transaction cycle as complete. If one transaction in a set fails, every is entry rolled back to leave data in its original state before the action was performed.

4.5.5 Re-assign Batch

There are some instances whereby batch ownership should be changed and assigned to another user for various reasons to continue with business operations, this feature helps you to achieve this.

4.5.6 Batch Operations

This module offers several actions such as batch/transaction reversals, batch/transaction deletion, batch closure etc.

4.6 SHARES MANAGEMENT

This module manages shares being held by your customers offering share account management, and paying out dividends where applicable.

4.6.1 Share Accounts

Share accounts are different from CASA accounts whereby these hold redeemable and non-redeemable shares accumulated by customers through monthly contributions, deposits etc.

Each account is linked to shares product that determines actions to be performed by the system such as accounting rules, and paying dividends. The account number generation is derived from the one used for CASA account. An account can be created with any currency denomination i.e. USD, MWK, and EUR in and the system will use current exchange rates when processing deposits and withdraws

AF 360 allows a customer to withdraw against redeemable shares as non-redeemable shares are for Financial Cooperative/MFI offering this service

4.6.2 Dividend Cut-off

Before running dividend, cut-off needs to be maintained indicating when to archive shares to be used for dividend payments, when to remit funds to customers, dividend per share etc. Once this is maintained, the system automatically archives the shares on the specified cut-off date

4.6.3 Run Dividend

This is the process of calculating dividend for each customer shares and tax is applied if attached product is configured to compute this and advice payment slips can be generated for submission

4.7   TRANSACTION MANAGEMENT

AF 360 provides comprehensive recording of all key transactions taking place such as disbursements and reversals, withdrawals, or deposits using cash or cheque to the various accounts. It further provides for continuous monitoring of operating cash balance by Cashiers/Tellers and enforces applicable restrictions such as maximum cash allowed for cashier to disburse or hold.

Some additional features under this module are as follows:

- The system automatically created corresponding GL accounting entries basing on product mapped to customer/share account being transacted against but GL Accounts are not effected during teller's transaction posting
- GL Account balances are only updated by the system once the batch or transaction has been authorised successfully
- In case a batch needs to be re-assigned to another user i.e. teller, this feature is available to perform this action
- Batch reversal, deletion features
- Daily exchange rates capturing
- Printing of receipts, deposit slips etc.

4.8   LOANS AND REPAYMENTS

This module is used for the managing loan applications and loans that have been issued to customers.

4.8.1   Loan Application

Before a loan can be issued, a customer must first apply for one. This feature simulates the loan application process allowing users to capture, and authorise loans. If six-eye principle is activated on the loan product then users are required to approve the loan application in addition to the previously mentioned actions. An authorised loan application will then become active within the system and will be maintained as a loan account. As there are various sets of documentation required at the different points of the system, the system allows users to upload these documents as part of the loan application.

4.8.2   Loan Disbursement

This feature is used to authorise the disbursement of funds from the institutions account to a customer's account.

4.8.3 Loan Operations

This feature is used to effect the day-to-day loans operations such as writing loans off, holding or freezing loans, early liquidation, and rollover.

4.8.4 Loan Repayment

This feature is used to handle payments made by customers towards a loan. Once payments have been authorised the customer's loan account will be updated accordingly to reflect the payment along with the related general ledger accounts.

Some other features for this module includes:
- Auto-calculation of interest using product set method i.e. compound interest, simple interest or amortisation
- Auto-maturity of loan and email is generated
- Auto-email generation of due to mature loans in N days
- Auto-creation of repayment schedules

4.9 DEPOSIT CONTRACTS

Deposit contracts are agreed upon between the institution and it's client in order to ensure timely payments are done according to agreed payment schedule if a client is paying back a loan. The system allows for the institution to define various input parameters that serves as a deposit contract that can be tracked and alerts automatically triggered at various stages of a running contract.

4.9.1 Deposit Contract

This feature is to define deposit contract maintenance that serves as a payment schedule for client (Fixed deposit products, loan payment schedule)

4.9.2 Contract Maturity

The feature allows you to define contract maturity dates that serve as the end of the payment schedule as agreed between an institution and its client

4.9.3 Contract Operations

This feature is used to effect day-to-day contract operations such as the temporary freezing of a deposit contract, surrender of a deposit contract.

4.9.4 Contract Cash Deposit

This feature is used for the contractual obligation of a client paying as mandated by the deposit contract.

4.10 BUSINESS REPORTING

AF 360 provides information that assists in decision making at different levels of the organisation through reports. The system categorises the reports based on the different groups of users of the information that the system produces. AF 360 employs a reporting framework that ensures that a certain minimum number of reports is available to the institution that meets its information needs, depending on institution size and the range of products and services being offered. It presents its reports in a hierarchical structure, which starts with detailed transaction reports valuable at the branch level and moving up to summarized financial statements and operational information, as well as trend indicator reports required by senior management and the board of directors of an institution.

4.10.1 Core Financial Reports

AF 360 supports most of core accounting reports to determine the health of your organisation at any point in time as highlighted below:

- Balance sheet (Both branch-level & organisational-level)
- Cash Flow Statement (Both branch-level & organisational-level)
- Trial Balance (Both branch-level & organisational-level)
- Income Statement (Both branch-level & organisational-level)
- Chart of Accounts/GL Tree Structure
- Company Net Worth/Equity Position
- Non-financial data report
- 2 year-ends Comparison Reporting
- Company Portfolio Ratios etc.

4.10.2 GL, Shares, CASA Reports

AF 360 offers reports under GL, Shares and CASA modules for better decision making and analysis as follows:

- General Ledger Account Statement
- General Ledger Current Balances
- Customer Account Statement
- Customers Listing Per Branch
- Customer Profile
- Overdrawn Customer Accounts
- Customer Accounts Summary
- Batch Transactions Detailed By Date Report
- Customer Group Members Report
- Shareholders Listing
- Shareholder Account Statement
- Dividend Payment Statement

- Dividend Remittance Detailed Report
- Deposit Slip Printing etc.

4.10.3 Loans, Deposits Reports

AF 360 offers reports under Loans and Deposits (Fixed/Recurring) modules for better decision making and analysis as follows:

- Loan Account Statement
- Loans Aging Report
- Written-off Loans
- Loans In Arrears
- Deposit Contract Listing
- Due to Mature Loans/Deposit Contracts
- Deposit Contracts In Arrears etc.

4.11 SYSTEM PARAMETERISATION

In order to use the system properly, some initial settings have to be set suitable for your business operations such as:

- Branch Parameters
- Company Portfolio Parameters
- Company Branches
- System Dates
- Transaction Types
- Charge Types etc.

4.12 SYSTEM CONFIGURATION

The system offers flexibility of setting up parameters to suit your business operations in which some of them includes:

- Banks and Branches
- Countries
- Departments
- Districts
- Employee companies
- Mobile money providers
- Nationalities
- Holiday maintenance
- Accounting cycle
- Currency types

- Utility providers etc.

4.13 MAKER/CHECKER FEATURE

This feature is available in all user interfaces/pages and implies that one user creates a transaction, and the another one authorises it to mark it as completed. Once a transaction/record is authorised, it will never be deleted from the system rather it can be disabled for transacting but only available for reporting

4.14 SYSTEM SECURITY

Security features have been introduced to make the application secure from both authorized and unauthorized users as follows:

- Every user is assigned a default company portfolio and/or branch
- Password recovery feature is available. This means that if a user forgets their password, their log-in credentials will be sent to their mailbox. Once logged in, the user will be forced to change the password
- System menu items are generated dynamically based on access rights granted to logged user.
- Every URL is validated before accessing its corresponding page, and further validation if the logged user is allowed to access the resource or not
- The application is using 256-bit encryption algorithm for password protection
- Audit trail facility now tracks the IP address of a computer undertaking AF 360 operations
- Access rights are assigned to a company portfolio and/or branch per user. This means that one single user can have different access rights for different branches, an ideal control mechanism for counter operations
- User interfaces (i.e. application pages) can be set to require the secondary password authorization when accessing them. However, some pages will by default always require secondary password authorization and it cannot be turned off.
- You can also restrict access to the system by setting permitted time and day:
  - Deny or grant access on public holidays
  - Deny or grant access on weekends
  - Set working time such as from 7:30am to 5:00pm

Some additional features to this modules:

- Computer-based Restrictions: This feature allows the user to restrict what computers to access AF 360 Core application. By default, this feature is enabled to enhance the security of the system

- <u>Permitted Days & Time</u>: This feature allows users to restrict access to the system according to dates and times. By default, the access on public holidays setting is enabled to enhance the security of the system
- <u>User Profiles</u>: This is the heart of system's security. Each user profile has got menu items assigned and each menu item can be granulised to restrict actions to be performed on the page such as creating records, editing records, deleting records, viewing records, authorising records, etc.
- <u>System Users</u>: This feature is used to define the users of the system. Each user is tied to a single user profile, and is given two password, an access password (used for logging in to the system), and a secondary password (for accessing pages needing second level log in)
- <u>Security Options</u>: This feature is used to configure the advanced security settings such as minimum password characters, password complexity, computer-based restrictions, maximum invalid log-in attempts, etc.
- <u>Logged in Users</u>: This feature is for viewing all users who are logged in on either AF 360 Core and Mobile
- <u>Audit Trail</u>: This feature tracks all user actions performed when using the system in detail. The data is captured in two modes namely BEFORE_IMAGE (detailed data before changes) and AFTER_IMAGE (detailed data after changes) which allows the user to see the data was changed etc.

4.15 PAGE NAVIGATION EXPERIENCE

With AF 360 Core having more than 70 user interfaces and 40 defined reports, navigation between pages can be difficult. To overcome this problem, the following features were incorporated to improve user navigation experience:

- <u>Page Code</u>: as in any web-based application, there are no shortcut keys to navigate to a specific page. So, AF 360 Core has got a specific code assigned to every page for example, to access CASA Accounts page, code assigned is <u>CSACCS</u>
- <u>Menu Grouping</u>: all menu items have been grouped to simplify the searching of functions within the system

4.16 SYSTEM OPERATIONS

AF 360 heavily depends on automatic processes in order for other functions to be further processed and most of these processes depends on data set before its executions and some are user initiated close of business operations which create entries, calculate interest, calculate monthly charges, zeroing expense & income accounts and post to profit/loss GL account, account balances archiving, exchange rates archiving etc. The system offer 3 types:

- End of Day (EOD) Process
- End of Month (EOM) Process

- End of Year (EOY) Process

5. REPORT CUSTOMISATION MANAGER

The system provides for a flexibility of customizing standard reports, offering a unique concept as follows:

- You can completely create a new report from any data source from the system's database and embed them into the system
- Report criteria specified using a custom business language
- Custom reports supports role based security
- Designed with performance in mind
- Provides instant insight into potential business hotspots

6. AF 360 CUSTOMER PORTAL

This is a web-based application to accommodate new remote access technologies on demand and mobile specifically for customers. Features incorporated in this platform include:

- Password recovery through emailing
- If 4 invalid log-in attempts are reached (set by default), user account is locked out
- Customer is _required_ to have their email address added in the System in order to be granted access.
- Improved user-interface for better user experience
- Viewing of various transactions
- Viewing of shares and balances
- Viewing of dividend payment transactions
- Viewing of cash transfer transactions
- Viewing of customer personal details
- Viewing of credit/loan balances
- Viewing of loan statements
- Loan application
- Loan calculation simulation
- Deposit contract calculation simulation
- Viewing of deposit contracts i.e. fixed deposits
- Viewing account statement i.e. CASA accounts, Shares accounts
- Resetting password within the system

NOTE: if one email address is used for multiple customers in the system, every transaction will be available once logged in using that email account

7. AF 360 INTERFACE READY

There might a need of an external system to interface with AF 360 within an organisation, the module of handling this is available to ensure seamless transmission of data between systems. Currently the system supports the following interfaces:

- Mobile-Money Integration
- Bank Transfer through national payment system using SWIFT Messaging Standards
- Web Services Interfaces
- XML/CSV File-Based Integration

8. NOTIFICATIONS

This feature enables user(s) and customers to get notified on events happening to data stored in the system. The following are the elements for notifications module:

- Notification Engine: this is a background process for sending SMS or emails based on configurations set
- Customer notifications: by default, the system generates emails for different transactions affecting the customer. You can turn on/off notifications for these processes depending on your preferences
- User Notifications: these cannot be turned off and system notifies the user(s) on events happening within the system for the attention of institution, on various areas.

9. TECHNOLOGIES

This is a complete web-based application solution suite, meaning a single installation on the host server suffices, and is accessible anywhere through web browsers of any computer.

9.1 DEVELOPMENT PLATFORM

The following technologies are used for the design and deployment of the system:

- Microsoft C# 2012 – Core programming language
- Microsoft SQL Server 2012 (note that it's also compatible with SQL Server 2008 R2)
- .NET Framework 4.5
- HTML, CSS2 & CSS3
- Entity Framework 5.0 – Data Access Layer (DAL)
- jQuery 1.9
- AJAX Control Toolkit 4.5
- Custom libraries (DLL) developed by Angle Dimension

- 3-tier Architecture Approach (User/Presentation tier, Application Logic tier and Database Tier) that can also be implemented on one server box in case of resource constraints

9.2 SERVER IMPLEMENTATION PLATFORM

The following are recommended prerequisites of successful AF 360 on premise system implementation:

- Microsoft Windows Server 2012 Standard/Enterprise Edition 64-bit
- Minimum of 500 GB hard-disk space
- Minimum of 8 GB of RAM
- 64-bit hardware architecture
- Intel Xeon CPU @2.8GHz Quad-Core Processor
- Internet Information Server (IIS) 7/7.5/8
- Microsoft SQL Server 2012 Standard/Enterprise Edition installed

9.3 CLIENT IMPLEMENTATION PLATFORM

The following are recommended and tested browsers for AF 360 system to run successfully:

- Supports Internet Explorer 9 or later,
- Supports Firefox 20 or later
- Supports Google Chrome 20 or later