



**acts as a bridge between a
core banking software (CBS)
and Bangladesh Bank goAML
requirements**

goAML Middleware

MicroMac has developed a solution 'goAML Middleware' to produce CTR/STR returns to Bangladesh Bank as per their guideline. goAML middleware acts as a bridge between a core banking software (CBS) and Bangladesh Bank (BB) goAML web portal.



The solution:

- is developed in a State of art Technology, a 3-tier web based architecture
- have role and right based users' access to the system
- is fully parameterized
- simplifies the process to prepare the CTR/STR returns
- ensures 100% accuracy of CTR/STR return
- ensures in time return delivery
- reduces manual work and hence saves man-hours and operational cost
- increase visibility and transparency
- have the ability to export reports to MS excel/ MS Word/PDF
- has extensive MIS reporting

Representative Client:



Features:

- **Web Based Application:** goAML Middleware is a complete web based application. The system needs only be installed on the server placing minimal requirements on the end user workstation. This makes maintaining and updating the system much simpler as usually it can all be done on the server. Any client updates can be deployed via the web server with relative ease.
- **Lookups File Upload:** goAML Middleware can import lookups file provided by Bangladesh Bank. The tool will introduce an option to update the schema automatically with the lookup codes defined by the FIU in the "Lookup Master" screen. Reporting entities will not be able anymore to submit reports with undefined lookup codes. By default the following XML reference data are uploaded to the system:

- | | | |
|---------------------------|--------------------------|---------------------------|
| › Submission type | › Report Code | › Role type of Signatory |
| › Funds type | › Contact Type | › Entity person role type |
| › Account type | › Communication Type | › Occupation List |
| › Account status type | › Entity Legal Form Type | › Division Name |
| › Identifier type | › Transaction Item Type | › District Name |
| › Transaction Type | › Currencies Type | › Thana Name |
| › Transaction Item Status | › Country Codes | |

- **Mapping of Reference Data:** goAML Middleware has the option of mapping core data reference value with scheme file reference value.

Entity Status and Incorporation Legal			
* Code	* Description	* Entity Status	Incorporation Legal Form
G	PRIVATE LIMITED COMPANY	Yes	Private Limited
A	INDIVIDUAL - RESIDENT	No	Private Limited
E	PROPRIETORSHIP COMPANY	Yes	Proprietorship
P	NON-BANKING FINANCIAL INSTITUTIONS	Yes	Public Limited
F	PARTNERSHIP COMPANY	Yes	Partnership
X	AUTONOMOUS	Yes	Autonomous
K	ED. INST. - SCH / COLL. / MAD / UNIVERSITY	Yes	Autonomous
I	CLUB / SOCIETY	Yes	Autonomous
J	TRUST	Yes	Autonomous
N	LOCAL BANKS	Yes	Partnership
M	SEMI-GOVT. BODY	Yes	Semi Government
L	GOVERNMENT BODY	Yes	Government
T	PUBLIC LIMITED COMPANY	Yes	Partnership
H	CO-OPERATIVE SOCIETY	Yes	Autonomous
Q	HOSPITAL / CLINIC	Yes	Autonomous
Y	BANKS OWN PORTFOLIO	Yes	Others
B	INDIVIDUAL - RESIDENT1	No	Select
C	INDIVIDUAL - RESIDENT2	No	Select

Add More

Update Cancel

Figure: Mapping of Reference Data

- **Definition Setup for CTR and STR Transaction:** The tool will have the option to setup the definition for the CTR and STR transaction. All transactions can be entered or uploaded to the system, but system will select those transactions that meet the definition of CTR or STR at the time of generating the CTR or STR report.
- **Account Information Upload and Entry:** goAML Middleware will have the option to upload customer account information. This will help lookup customer account details when customer account number entered at the time of manual transaction entry.

Home User Management System Setup Data Entry Report Help GOAML

View Account Add Account Edit Account Delete Account Upload Account

GoAML > Account > Upload Account

Upload Account

Update
Cancel

Upload Account Information

* Account File	<input type="text" value="Browse... 2.Account.csv"/> Upload only .csv File
* Owner File	<input type="text" value="Browse... 3.Owner.csv"/> Upload only .csv File
* Director File	<input type="text" value="Browse... 4.Director.csv"/> Upload only .csv File
Over Write if Exist	<input type="checkbox"/>

Update
Cancel

Figure: Upload Bulk Account Information

Besides upload there is user friendly option to manually entry the account information.

Brochure of goAML Middleware © MicroMac Techno Valley Ltd.

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Home User Management System Setup Data Entry Report Help GOAML

View Account Add Account Edit Account Delete Account Upload Account

GoAML > Account > Edit Account

Edit Account

Update Cancel

Account Information

Account No. *	001610000000699	Account Title *	INT'L TRADE AGENCIES (PVT) LTD
Institution Name	Dhaka Bank Limited	Branch Name-Code *	AGRABAD BRANCH (0016)
Non Banking Institution?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Code *	DHBLBDDH
Code or SWIFT?	Yes <input checked="" type="radio"/> No <input type="radio"/>	Account Status	Active
Account Type *	Current Account(Taka)	Beneficiary	
Currency Code *	BDT (Taka)	Client Number	21667
IBAN		Closed on	
Account Opened on	23/01/1996		

Entity +

Entity Name *	INT'L TRADE AGENCIES (PVT) LTD	Commercial Name	
Incorporation Legal Form	Private Limited	Business *	Others
Incorporation Number *		Incorporation Date	
Incorporation Division		Incorporation Country Code	Select
Email		Url	
Tax Number	3752000461	Tax Reg Number	
Comments			
Business Closed?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Date Closed	

Phones *	Contact Type *	Communication Type *	Country Prefix Type	Number *	Extension
	Select	Select			

Addresses *

Type *	Address *	Town	City *	Zip	Country *	Division
Present	JAHAN BUILD NO.3.(2ND		CHITTAGONG	.	BANGLADESH (BD	
Permanent	JAHAN BUILD NO.3.(2NC		CHITTAGONG	4100	BANGLADESH (BD	

Add Director *

#	Title	Name	Father's name	Mother's name	Action
1	Mr	MAHMUD ALI	Nurul Islam	Fatema Khatun	<input type="checkbox"/> <input checked="" type="checkbox"/>

Add Signatory(ies) *

#	Title	Name	Father's name	Mother's name	Action
1	Mr	MAHMUD ALI	Nurul Islam	Fatema Khatun	<input type="checkbox"/> <input checked="" type="checkbox"/>

Beneficiary Comment:

Comments:

Update Cancel

Figure: Account Information Entry/Update Page

- Account Information Error Handling:** The system is capable to generate smart report of the missing information of accounts, which will help the users to update the account information in shortest possible time.

WAR TOOL goAML middleware

Name: Md. Arifur Rahma (E. ID: 7777) Branch: AGRABAD BRANCH 15, May 2014 Thursday Sign Out (Md. A

Home User Management System Setup Data Entry REPORT Help GoAML

rt > GoAml Reports

Account Error Report

Account NO/Title: 001810000000051 Branch: ALL Account Type: ALL Search Now

Upload Date: To:

SL	Account No	Account Title	Branch Name Code	Account Type	Errors
1	001810000000051	M/S FARHAD STATIONERY	JUBILEE ROAD-0018	Current Account(Taka)	Entity Incorporation Number is missing Entity Phone Contact type is missing Entity Phone Communication type is missing Entity Phone Number type is missing Director is missing Signatory is missing

- **Import Transaction Batch File:** goAML Middleware is capable to import transaction batch (CTR, STR or all transactions from core system) file from core software. Based on this transaction file STR and CTR report will be generated.
- **Manual Transaction Entry:** Besides upload transaction batch file there will be option to manually entry the transaction into goAML Middleware. In this case Account information can be driven from the core system.
- **Verify Transaction:** All transactions can be uploaded to the system. There are options to verify the transactions from branch.
- **CTR Report Generation and Error Handling:** As per Bangladesh Bank schema rule CTR report will be generated. If any error found this will be logged and there is option to download the error log.

The screenshot displays the goAML Middleware interface for generating a CTR report. At the top, there are search filters for Report Type (Cash Transactic), Date (01/01/2014 to 10/01/2014), and Limit (500). Below the filters is a table with columns: SL, Transaction No., Internal Reference No., Transaction Date, Transaction Type, Amount, and Source Party Particulars. The table contains five rows of transaction data. A red overlay box titled 'Error found' is positioned over the table, listing various error messages such as 'Row 16 Transaction Number: DHBLBDDH TRNWEB 2014-05-15 300079 to party account entity incorporation number not found'. At the bottom of the interface, there is a 'GoAML Report Information' section with fields for Submission Code (Electronic), Report Date (15/05/2014), and Entity Ref No. (21312312). A 'Create / Download' button is located at the bottom right of this section.

Figure: CTR Report Generation and Error Log Download

- **Email Notification:** An email notification can be sent to the higher authority (as per system setup) at the time of generate the XML file.
- **Audit Trail:** goAML Middleware will maintain audit trials for the sensitive activities by the users as functions set by the system administrator.
- **Archive:** goAML Middleware is capable to archive the XML files automatically. And also have the option to download the XML files from the archive to reuse.
- **User Management:** goAML Middleware has an extensive user module. Besides create/edit/delete users there will be option to set user privilege. Roles, a way of assigning specific permissions to a group, allow fine fine-tuning the security, use and administration of the software. Users assigned to the role, or group, are granted those permissions assigned to the role. Users access only the data and functions they are permitted to.












- **Reporting:**
 - CTR Report
 - STR Report
 - User Log Report
 - List of User
 - User Daily Activity Report
 - Account Error Report
 - Transaction Error Report

Beside the above stated reports there will be option to generate various customize reports.

How goAML Middleware works

- Step 1: Transaction and account information will be uploaded centrally.
- Step 2: Each branch users will get their screen to verify the uploaded transactions and account information. They can also update transaction or account information if needed.
- Step 3: Then the CTR/STR reports can be generated centrally. Branch wise CTR/STR report generation is also available.
- Step 4: Submit the report to Bangladesh Bank goAML portal.

Technology Used

Framework	 CodeIgniter
Programming Language	 php
Database	 MySQL
Scripting Language	 Java Script  AJAX
Web Application Server	 APACHE
Editor	 Macromedia Dreamweaver
OS	 Linux  Windows
Certified Browser	 IE  Firefox

Hardware & Software Requirement

Hardware requirements - Web Server and Database Server

The requirements in the following table apply both to installations on a single server with a built-in database

Component	Minimum requirement
Processor	Quad Core Intel Xeon Processor 2.53 GHz or Higher
RAM	8 GB (minimum) 16 GB (Recommended)
Hard Disk	1 TB (minimum) 2 TB (Recommended) For production use, you need additional free disk space for day-to-day operations.

Software requirements - goAML Middleware requires a web server environment and will run in Apache easily. The tool will run in any server environment that supports PHP.

goAML Middleware will use MySQL as a database.

Component	Requirement
Operating System	Linux
Web Server	Apache 2.2.11
PHP	PHP 5.2.6 or 5.2.8
Database Server	MySQL 5.1.30

Contact Information

MicroMac Techno Valley Ltd.

215/A, Outer Circular Road, Baro Moghbazar, Dhaka 1217

Email: postmaster@mmtvbd.com

Phone: +88-02-9342717

Cell: +88-01928-702702

Web: www.mmtvbd.com