NPL-TAP-2023/002

PCT/NPL-2023/002 (Patent Application No. E202304140422XPF1WS).

TITLE OF INVENTION

[0001] **TRADE AUTOMATION CONNECTS BUSINESS TO BUSINESS (B2B) AND REGULATORY AUTHORITY FOR AUTOMATIC DECLARATION OF EXPORT AND IMPORT DOCUMENTS, OPENING OF LETTERS OF CREDIT, INVOICE FINANCING, PO FINANCING, PREVENTS DUPLICATE OR FRAUDULENT INVOICE FINANCING OR PURCHASE ORDER (PO) FINANCING OR DOCUMENTARY CREDIT (DC) TRANSACTIONS, FOREX REQUEST AND PAYMENT OF DUTY.**

BACKGROUND TECHNOLOGY

[0002] The invention and specification relate to computer software technologies, and particularly to methods and devices for efficient reporting and tracking of export and import shipment documents, seamless documentary credit applications, prevents duplicate or fraudulent invoice financing or PO financing or DC transactions, customs declaration, forex request and payment of customs duty to the Government or Regulatory Authorities or Revenue Authorities and automatic update of Import Input Tax Credit for eligible import transactions.

[0003] Currently the business trade stakeholders work in silo and there is no consensus mechanism available through a central registry for validating and authenticating the trade transactions.

[0004] Export and import business transactions can be transmitted to the business users integrated ERP or accounting software without manual entry.

DESCRIPTION

[0005] The specification relates to the present invention platform computer software technologies, and particularly to the methods and devices for efficient reporting and tracking of export and import shipment documents, seamless documentary credit applications, invoice financing, po financing, prevents duplicate or fraudulent invoice financing or PO financing or DC transactions, forex request, digital validation of shipping documents, customs declaration and payment of customs duty to the Government or Regulatory Authorities or Revenue Authorities and automatic update of Import Input Tax Credit for eligible import transactions.

[0006] Trade Stakeholders comprises of the following:

a) Businesses (Exporters and Importers – Domestic and Overseas)

b) Trade Partners or Stakeholders

    1) Financial Institutions – Central Bank, Public and/or Private Banks (Buyer Bank, Seller Bank, Correspondent Bank, or Intermediary Bank, etc), Private Invoice Financing or Factoring Companies.
    2) Shipping Companies
    3) Insurance Companies
    4) Inspection Companies
    5) Certificate of Origin Issuers
    6) Clearing and Forwarding Companies
    7) Port Authorities
    8) Customs Authorities

[0007] Businesses register or Sign Up in the present invention platform and after approval of User Sign Up, an unique Global Trade Automation Platform ID will be issued.

[0008] Trade Partners or Stakeholders register or sign up in the present invention platform and offer their services to the registered business users.

[0009] The Business Users have few options to maintain and declare the Export and Import transactions through the present invention platform.

A) Platform as a Customer Relationship Management (CRM) to keep track of all types of export and import of goods and services shipping documents.

B) Connect via Trade Automation Platform Network to the participating trade stakeholders to obtain invoice financing, po financing, open documentary credit, bankers guarantee, forex request, get quote from shipping company, insurance company, inspection company, share only the necessary shipping documents to the respective trade stakeholder and keep control on the remaining trade documents.

C) Shipping and Inspection company stakeholders can validate the trade transactions as a consensus mechanism for other trade stakeholders on the authenticity of the transaction.

D) Businesses and Trade stakeholders can connect via Application Programming Interface (API) to their existing systems or access information via business user admin dashboard.

E) Share shipping documents digitally and securely to the various stakeholders via the present invention platform.

F) Transmission of Invoices and shipping documents to the registered buyers in Trade Automation Central Registry Platform via API connected Accounting Software, ERP solutions without manual entry of purchases.

[0010] The Trade Partners or Stakeholders have few methods to offer their services to business users.

A) Trade stakeholders can connect via Application Programming Interface (API) to their existing systems or access information via partner's dashboard

B) Trade stakeholders can validate and authenticate trade transactions as a consensus mechanism for other trade stakeholders

C) Trade stakeholders can connect their existing business users to avail Platform services via Single Sign On feature.

D) Trade invoice financing, purchase order financing, bills discounting can be controlled and approved via platform. This allows the lending partner to avoid double or duplicate financing for the same invoice, fraudulent transactions as the present invention platform is built with security, validation and end-to-end consensus mechanism.

E) Documentary credit can be issued seamlessly and instantly to the participating seller bank in the network without the need for intermediary bank.

F) Business users can request for Forex from participating financial institutions to settle Foreign Currency trade transactions.

G) Insurance companies can respond to quote request, issue cargo insurance certificate and approve trade credit limits for credit buyers.

H) Shipping companies can respond to quote request, issue digital bill of lading (BL), air-way bill (AWB), transport e-way bill and validate transport documents (BL, AWB, e-way bill) as a proof or validation of the shipment before the financial institutions approve the documentary credit or release invoice factoring or financing funds to the seller.

I) Inspection companies can respond to quote request, issue digital inspection certificate and validate the submitted inspection certificate by the seller as a proof or authentication of the shipment before the financial institutions release the funds for the trade documents.

J) Certificate of Origin (CO) issuers can respond to quote request, issue digital CO and validate the submitted CO by the seller as a proof or authentication of the shipment before the financial institutions release the funds for the trade documents.

K) Participating ports and customs authorities can obtain the shipping documents via the present invention platform dashboard. Alternatively, the present invention platform can be integrated via Application Programming Interface (API) to ports and customs existing trade systems.

TECHNICAL

A) THE BUSINESS USERS TO MAINTAIN AND DECLARE THE EXPORT AND IMPORT TRANSACTIONS THROUGH THE PRESENT INVENTION PLATFORM

[0011] Create Sales and Purchase Contract.

[0012] Submit pre-approval request for invoice financing or factoring or purchase order financing.

[0013] Open or receive documentary credit.

[0014] Submit invoice financing request from participating financial institutions for pre-approved credit buyers

[0015] Submit PO financing request to the preferred finance partner.

[0016] Real-time update of all connected stakeholder transactions and tools to extract various analytical reports and shipping status.

B) **THE TRADE PARTNERS OR STAKEHOLDERS TO OFFER THEIR SERVICES TO THE BUSINESS USERS THROUGH THE PRESENT INVENTION PLATFORM**

[0017] Approve documentary credit.

[0018] Approve invoice financing or factoring or purchase order financing pre-approval request.

[0019] Approve invoice financing request for pre-approved buyers and/or PO financing for pre-approved limits.

[0020] Check shipping documents and receive real-time validation / consensus from shipping company, inspection and insurance company on the authenticity of the trade transactions.

[0021] Quote FOREX rates with a validity period and time for business users request to settle foreign currency trade transactions.

C) **TRANSMISSION OF INVOICES AND SHIPPING DOCUMENTS TO THE REGISTERED BUYERS IN TRADE AUTOMATION PLATFORM VIA API CONNECTED ACCOUNTING SOFTWARE, ERP SOLUTIONS WITHOUT MANUAL ENTRY OF PURCHASES.**

[0022] Application Programming Interface (API) technical documents will be available for the respective businesses to integrate with their existing Accounting Software and/or ERP.

[0023] The Accounting Software and/or ERP providers will integrate with the present invention platform via the API which will enable the sellers to transmit the sales transaction details to the Revenue Authority and e-Invoice will automatically reflect in Buyers Accounting Software and/or ERP as Purchase Invoices without manually key in the purchase invoice data.

[0024] The purchase invoice will be reflected in the buyers accounting software and/or ERP only if they opt for the services.

[0025] The sales invoice transaction details viz. Brief Description of Products or Services, HS-Code, Tax Type (i.e. Standard Rate, Zero Rated, Exempted), Sales before Tax, Tax (Sales Tax or VAT or GST) and Sales including Tax will be transmitted to the opted Buyers to receive e-Invoicing.

[0026] In the process, if there are any errors in the submission, the present invention platform will prompt the user or seller to correct the error before trying for submission again.

TECHNICAL PROBLEMS OF THE BACKGROUND ART

1) The most important/key technical problems:

Currently the business users, financial institutions, authorities face the following problems.

[0027] Majority of the business users track the export and import transactions manually especially to check the past shipment records, product pricing, current shipment status, shipment documents receipt status, shipping document accuracy, submission of documents to various stakeholders like financial institution, inspection company, shipping company, insurance company, certificate of origin issuers, customs, ports, clearing and forwarding agent.

[0028] The manual checking, verification and tracking leads to unnecessary delay in clearance of shipments, demurrage costs and increase in raw materials or finished goods price.

[0029] The business owners will not be able to get precise analytical reports from the manual recording of shipment information. Preparing analytical reports from manual records will take more man-powers and will not be productive. This may be an hindrance in taking timely decision for procurement of goods at the right time or at the right price.

[0030] The business users especially small and medium enterprises find it difficult to get bank financing for invoice factoring for their credit buyers or PO financing for the

procurement of raw materials or finished goods as there is no consensus mechanism available through a central platform for the financial institution to check and verify the authenticity of the export transactions from the shipping company and/or inspection company.

[0031] The financial institutions do not have a real-time mechanism to check the validity or authenticity of the trade transaction which leads to approval of invoice financing for a fraudulent or duplicate funding request transaction.

[0032] There is no central platform available for all the public and private financial institutions to be part of the network to avoid double or duplicate funding. The business users may take duplicate funding for the same transaction especially for non-notified invoice financing transaction from different financial institutions as there is no control and check available for the financial institutions to track the lending process as all the stakeholders work in silo.

[0033] It functions fully on trust basis and there are high possibilities for errors and omissions in reporting by the business users especially those who do not have trained staff or proper accounting records, etc.

[0034] There are possibilities for the business units to under declare import of goods and pay less duty. The customs authorities in the receiving country do not have visibility in getting the real time information on the goods exported from the overseas country as it is not integrated with the exporting countries customs portal or the exporter is not part of the network.

[0035] The government can only identify those errors or omissions during tax audit, and it costs a lot as it may lead to considerable man efforts, time, recovery of lost income, etc. Also due to the volume of transactions and there is no consensus mechanism, there are high possibility that this type of errors and omissions may be unnoticed by the audit team.

2) The subordinate problems:

The following are the additional or sub-ordinate problems that surface due to lack of control and check procedures:

[0036] The short collections in taxes due to error or omissions in reporting will lead to short reporting of revenues and short collection of taxes.

[0037] The government statistical agency may not be able to derive the value of goods imported and exported out of the country if there are any under-declaration or over-declaration of values by the importers and exporters of goods.

DISCLOSURE OF INVENTION AND TECHNICAL SOLUTION

[0038] The present invention Trade Automation Platform is designed in such a way that it allows the business users to use it as an In-House CRM or opt to be part of the Trade Automation Platform Network to connect real-time with the buyers, trade stakeholders and government authorities seamlessly.

[0039] The seller and buyer can negotiate, send quote, digitally enter into a smart sales and purchase contract through distributed ledger technology (DLT) which is immutable, secured, transparent, seamless, time saving and effective.

[0040] The financial institutions and private finance companies can be part of the present invention platform immediately without integrating or connecting to their existing network. The financial institution can use the API to extract the relevant information from the enterprise grade secured Trade Automation Platform and transmit to their existing secured network.

[0041] The government agency and the other trade stakeholders shipping companies, inspection companies, insurance companies, certificate of origin issuers, customs, clearing and forwarders can be part of the present invention platform immediately without integrating or connecting to their existing business network. The government agency and the other trade

stakeholders can use the API to extract the relevant information from the enterprise grade secured Trade Automation Platform and transmit to their existing secured network.

[0042] The business users can avail invoice financing or po financing only when they opt to be part of the present invention platform network. The lending and approval process will be transparent for the financial institutions or private finance companies to obtain or review the trade transactions and the validation received from the shipping and/or inspection company on the genuineness of the transaction. This also gives confidence to the buyer that the ordered goods are shipped and it is verified by the third party shipping or inspection company.

[0043] The business users can obtain pre-approved credit limits from one or all the connected financial institutions. The business users can only submit their invoice financing or po finance request to one pre-approved financial institution. The present invention platform will prohibit the business user to submit the invoice finance request after shipment of goods to multiple financial intuitions. The system approval, rejection and cancellation request process works robustly to avoid duplicate or double funding request.

[0044] The present invention platform allows the business users to sign up and obtain the unique platform ID after successful KYC. The unique platform ID permits the business users to transact with other connected business users within the country and overseas countries seamlessly.

[0045] All the relevant stakeholders of the present invention platform will be able to see and/or receive notifications on the status of the each stage of the transaction in real-time.

[0046] The business users can open letter of credit, standby letter of credit, bankers guarantee, request forex from the participating or platform connected financial institutions.

[0047] The present invention platform can be hosted as an on-prem or cloud services.

[0048] The present invention platform comes with enterprise grade security features that transmits data securely and stored securely in the secured cloud servers.

[0049] The necessary Application Programming Interface (API) will be provided to enable the accounting software providers, ERP providers, in-house accounting software business users technical team to integrate with their existing systems.

[0050] The necessary Application Programming Interface (API) will be provided to the all the trade stakeholders to connect to their existing legacy systems through a single sign-on feature.

[0051] If the trade stakeholders legacy system is outdated, a pull or push data transmission can be arranged to export from the Trade Automation Platform to the stakeholders Legacy System. This will enable the stakeholders to have a complete picture of the business performance.

BRIEF DESCRIPTION OF THE DRAWINGS

[0052] Fig 1 – Represents Trade Automation Platform connecting the Businesses and all the trade stakeholders to execute trade transactions domestically or cross-border on real-time basis.

[0053] Fig 2 – Represents Pre-Approval of Finance Credit Facility Limits for credit buyers by the Financial Institutions.

[0054] Fig 3 – Represents Pre-Approval of Insurance Credit Facility Limits for credit buyers by the Insurance Companies.

[0055] Fig 4 – Represents Shipping / Logistics Request.

[0056] Fig 5 – Represents Inspection Request.

[0057] Fig 6 – Represents Certificate of Origin (CO) Request.

[0058] Fig 7 – Represents Customs Clearing & Forwarding Request.

[0059] Fig 8 - Consolidated view of the Trade Automation Platform Businesses and Stakeholders.

[0060] Fig 9 – Process flow for bank letter of credit or documentary credit (DC) transaction.

[0061] Fig 10 - Process flow for open account (credit terms) | invoice finance (factoring) transaction.

[0062] Fig 11 - Process flow for shipping | logistics | insurance | inspection | regulatory services.

TECHNICAL SOLUTION

[0063] The present invention platform built with enterprise grade security features.

[0064] It saves time for all the stakeholders viz. Business Sellers, Buyers, Financial Institutions, Shipping Companies, Inspection Companies, Insurance Companies, Certificate of Origin Issuers, Customs, Ports, Clearing and Forwarding agents in executing seamlessly the cross border trade transactions.

[0065] Minimal or less physical audit required.

[0066] Electronic information available 24/7 and reduces manual paper documentations.

[0067] Cross border connectivity.

[0068] Transparency.

CLAIMS

[0069] Claim 1. A computer software technology, and particularly to methods, process and devices for efficient reporting of export and import documents, validation of authenticity of shipping documents, opening of letter of credit, invoice financing, purchase order financing, prevents duplicate or fraudulent invoice financing or PO financing or DC transactions, forex request and payment of duty to the Government or Regulatory Authorities or Revenue Authorities.

[0070] Claim 2. A computer program to mitigate digital reporting fraud and full consensus mechanisms available between the seller, buyer, trade stakeholders and the regulatory authorities for trade transactions reporting and tax collection.

[0071] Claim 3. A computer program works as a plug and play for all trade stakeholders from any country to use the present invention platform (after basic configurations and customisation) for complete transparency in trade transactions.

[0072] Claim 4. A computer program network that can be connected to B2B marketplaces to execute high value transactions.

[0073] Claim 5. The computer program allows the trade stakeholders to implement the system immediately without a need to integrate with their legacy systems.

[0074] Claim 6. A computer network that allows the business users to electronically transmit e-invoices to the connected peers end software as a purchase invoice. Saves time and cost for businesses to transact and record transactions.

[0075] Claim 7. The present invention platform acts as a digital documents registry, accessible online 24/7 all digital shipping documents, various analytical reports and eliminates manual work.