Challenge Competition 2020

On

Online Certificate Verification and Notarization Platform using BlockChain Technology

Background

In this modern age, with the advancement of technology , many types of deceptions have been created. So in order to keep pace with the present world, we have to make maximum use of technology and try to keep ourselves under the shadow of modern technology. We are on the verge of information driven Fourth Industrial Revolution (4IR), with the advent of multiple emerging technologies. This revolution exposes new challenges as well as exciting opportunities. Only the countries with expertise in these emerging technologies can successfully meet the challenges and exploit the opportunities.

At present, people are being deceived in various ways through various technologies. Production of fraudulent documents, or fake degrees and diplomas, has been a example which is going on since long.

Not only the education sector has occurred, it also has an impact on jobs, immigration, visa allocation and identity fraud, which is often affected by the 'trade' racket, making a nation badly reputable. Often use of fake certificates in the health and engineering sectors may directly affect people's lives. It has a negative effect on our national skills as a whole.

In Bangladesh, the retirement system is reconciled on the time of paying pensions. During this time, the calculation of pension is done manually where there always remains a chance to manipulate data.

Different countries of the world are taking the help of various technologies to avoid such scams, in which Bangladesh is lagging far behind the developed countries.

Blockchain technology is widely regarded as one of the core and foundational technologies that will be one of the driving forces for the upcoming 4IR. Realizing its potential, many developed as well as developing countries around the world have started exploring how blockchain technology can prepare them for the future challenges and benefit them to solve many existing complex problems to achieve the Sustainable Development Goals (SDGs) by 2030.

Blockchain or Distributed ledger technology (DLT) can be used to store permanent and tamper-proof records of digital data (digital assets). A blockchain is a distributed ledger consisting of consecutive 'blocks' of digital data chained together following a strict set of rules. The ledger is distributed and stored by the nodes (computers) of a peer-to-peer (P2P) network. Each block of data is periodically added to the ledger in a decentralized fashion. The order of the blocks is confirmed through the use of a distributed consensus algorithm.

To overcome these situation and to keep pace with the current world for avoid various scams we need to explore blockchain technology in order to advance its technical capacity, increase efficiency in e-governances and foster innovations. So a common tool can be developed using blockchain technology which will provide online verification service for any kind of certificate. The Platform can be a complete system that includes hardware and software with advanced technologies. Initially the Platform can be integrated with our Online Learnign Platform Muktapath and later will be Hub of all the Educational Certificates of Bangladesh Inclusing School, College, University and others.

Problem Statement:

Online Certificate Verification and Notarization Platform using BlockChain Technology.

The Challenge

Need a team of blockchain experts, seasoned technologists, academicians, government officials and other stakeholders.

To implement that kind of technology need formulate plans to develop a blockchain integrated national information infrastructure. Also need to integrate the most relevant online services with a suitable blockchain platform.

Capacity needed for research, innovation and training with increasing awareness.

The intended system will deploy advanced technologies that were not tested in local context before. So gound reality and long term hastle free operation should be considered. Teams would require guidance of technology experts in designing an worthy solution.

Breadth and depth of the solution depends on the imagination of the respective teams. Teams can consult with other already deployed ideas in countries with similar setting.

Handsome funds needed to initiate and maintain these activities.

Intended Benefits

- Digital Notarization of Certificates where Certificates are accessible, sharable and verifiable from Anywhere and Anytime.
- A blockchain-based verification system can guard against the fake certification or fake degrees and diplomas.
- Large number of Certificate Verification with minimum Time and Cost.
- There is a huge potential for blockchain technology in the employment, immigration, visa allocation areas.
- Health data is collected when a patient undergoes some medical treatments including tests and diagnosis. Generally, in Bangladesh, the results are signed by the doctor and are delivered to the patient which they can keep with full control. Unfortunately, such a process imposes several challenges: it has a very limited scope to preserve, storage and retrieve such information for further consultation. An automated system is the solution; however, a centralised system has a single point of failure and they do not promote transparency. A blockchain based solution which stores and retrieves medical data in a privacy-friendly way is the perfect solution in this scope.

Judging Criteria:

The prize will be awarded, at the end of the contest, to the application who in the opinion of the jury demonstrate a solution (encouraging a system prototype demonstrated in an operational environment) that best addresses the cumulative criteria for "Efficiency", "Reliability" and "Innovative and Original Design". The following criteria are available but not limited options for the jury:

- Proposed solution needs to be financially viable, socially desirable, practically implementable, technologically feasible and with a profitable business model.
- The proposed solution should have a minimal negative impact on the environment; sustainability will be considered throughout the whole life-cycle of the proposed solution.
- The proposed solution is expected to be with detailed system and design architecture with a demonstratable prototype.
- The proposed solution is expected to be easily deployable, configurable and disposable, with only minimal human intervention required in the operational environment. In this sense, interactive platform, gamification etc. will be preferred.
- Robustness of the materials used in each component of the device (if any) should be able to withstand the conditions expected in the relevant environment (e.g. temperature, pressure, humidity) for the desired amount of time.
- Compliances with inter-operability standards will be considered as an asset.
- Business feasibility and nation-wide scale up plan needs to be incorporated in the proposed solution.

Schedule:

Registration information Publish:	15/08/2020
Registration Begins:	20/08/2020
Registration Close:	10/09/2020
Short listed applicant list publishes:	12/09/2020
Demonstration begins:	13/09/2020
Demonstration ends:	17/09/2020
Award/Prize announces:	30/09/2020
Ceremonial event:	01/10/2020

Eligibility

Who Can Participate

The contest is open to any legal entity or group of legal entities who are involves with Information Technology.

Who Cannot Participate

Participants will be excluded if they are subject to an administrative sanction (i.e. exclusion) and are in one of the following situations:

- bankrupt, being wound up, having their affairs administered by the courts, entered into an arrangement with creditors, suspended business activities or subject to any other similar proceedings or procedures under national law (including persons with unlimited liability for the participant's debts)
- declared in breach of social security or tax obligations by a final judgment or decision (including persons with unlimited liability for the participant's debts)
- found guilty of grave professional misconduct by a final judgment or decision (including persons having powers of representation, decision-making or control)
- convicted of fraud, corruption, involvement in a criminal organization, money laundering, terrorism-related crimes (including terrorism financing), child labor or human trafficking (including persons having powers of representation, decisionmaking or control)
- shown significant deficiencies in complying with main obligations under a procurement contract, grant agreement or grant decision financed by the GoB (including persons having powers of representation, decision-making or control)
- have misrepresented information required for participating in the contest or fail to submit such information
- were involved in the preparation of the prize documents and this entails a distortion of competition.

Prizes:

- After the ideas are selected, the team will have all support for the prototype development phase which may take 3 to 6 months. A2i will sit with the innovators to assess the requirements in terms of equipment, human resources and any others until a functional prototype is executed and tested in real time.
- After the prototype is successfully run and tested, further commercialization or upscaling process may begin with relevant government ministries and departments.

Documents:

The mandatory supporting documents will be set out in the application form.

Participants may be asked at a later stage for further documents (for legal entity validation, bank account validation, ethics review, declaration of honor on exclusion grounds, etc.).