SUSTAINABLE DEVELOPMENT GOALS (SDGS) DIGITAL POINT SYSTEM AND IMPLEMENTATION METHOD THEREOF

BACKGROUND OF INVENTION

FIELD OF THE PRESENT DISCLOSURE

[0001] The present invention relates to a digital point system, and more particularly to an Sustainable Development Goals （SDGs） Digital Point System and an implementation method thereof, which are operated through an information device and a system, so as to advocate and encourage the fulfillment of environmental Sustainable Development Goals (SDGs).

BRIEF DESCRIPTION OF RELATED ART

[0002] The Sustainable Development Goals (SDGs) were adopted by the United Nations in 2015 under the 2030 Agenda for Sustainable Development, setting forth 17 goals to guide global progress toward sustainability. SDGs began to be promoted globally in 2016 in a process referred to as the localization of SDGs. Governments of all nations must actively seek partners, uniting all entities, peoples, universities, governments, institutions, and organizations to work collectively toward multiple goals according to their respective national circumstances; at the same time, they must incorporate the goals into national legal frameworks and enact legislation, formulate implementation plans and set budgets, and protect the planet while promoting economic prosperity. Furthermore, the SDGs call on all countries—whether poor, wealthy, or middle-income—to take action. The goals indicate that the eradication of poverty must proceed hand-in-hand with a range of strategies, including promoting economic growth, addressing societal needs in

education, healthcare, social protection, and employment opportunities, combating climate change, and protecting the environment. Therefore, less-developed nations also require support from more-developed nations, making international coordination extremely important.

[0003] However, because the SDGs constitute a global set of development indicators, the differences in the environmental, political, and economic circumstances of individual countries have given rise to numerous challenges in the process of their promotion and implementation. For example, the SDGs encompass 17 goals covering 169 sub-targets; governments of different countries face their own inherent difficulties in advancing relevant policies based on their respective circumstances, and with the sheer number of indicators, the social cost of promotion alone is considerable. As a result, even highly developed nations encounter numerous difficulties in promoting the relevant indicators, let alone less-developed nations. Furthermore, among the various indicators, some are achievable only by enterprises or organizations, while others may be achieved by individuals; however, the foundational unit is always the individual person. For example, climate action, conservation of marine ecosystems, and conservation of terrestrial ecosystems are broad environmental indicators, but they must all begin from “foundational education,” and the audience of “education” is “people”—that is, enabling people to understand that individual behavior ultimately affects changes in the overall environment. In sum, the most basic unit driving the promotion and achievement of each SDGs indicator is the individual person; therefore, for groups, organizations, and policies to be effectively promoted, the individuals who implement and participate must have an understanding of and identification with the core objectives and detailed content of the SDGs before the foregoing indicators can be concretely realized.

SUMMARY OF INVENTION

[0004] The primary objective of the present invention is to provide an Sustainable Development Goals (SDGs) digital Point System and an implementation method thereof, which take knowledge input as the starting digital point and learning as the process, so that ordinary individuals may, through participation and interaction with the platform, absorb and acquire knowledge regarding the various indicators of the SDGs, and, in combination with enterprises and group organizations, form a cyclically interactive SDGs ecosystem, thereby achieving the purpose of making the SDGs realizable.

[0005] To achieve the foregoing objective, the present invention is primarily structured around a central processing module as the core, with a member management module, a digital point module, a redemption module, and a blockchain module in communicative connection with the central processing module to constitute the present invention. The present invention is further provided with a user platform, which allows a user to log in to the SDGs Digital Point System for operation, or alternatively to complete a communicative connection via an external information device to enable remote operation on the external information device.

[0006] The digital point module primarily comprises a quiz unit, an activity record unit, and a consumption record unit. The quiz unit is configured to generate a plurality of questions items for a user to answer and to store the answers and records thereof; the activity record unit is configured to record and store a history of activities linked to and participated in by the user through the platform; and the consumption record unit is configured to record and store a history and records of consumption transactions generated by the user through the platform.

[0007] The redemption module is primarily configured such that when a user executes a redemption instruction, the user may redeem digital points held by the user, through operation, for corresponding products or service items.

[0008] The blockchain module is primarily configured to perform an on-chain procedure on the various records completed by the user on the user platform, so as to render each record immutable and traceable.

[0009] In addition, the member management module is in communicative connection with a member database, which is configured to store member data registered on the user platform, such as usernames, user codes, and user passwords.

[0010] Furthermore, the present invention is primarily implemented by a user logging in to the user platform using a user-side information device, after which the user may perform actions on the user platform such as answering question items, making purchases, or participating in activities, and may obtain digital points upon completing at least one of the foregoing. After obtaining digital points, the user may redeem goods or services on the user platform using the digital points. Moreover, the party providing goods or services for redemption—such as an enterprise or group organization—upon completion of the redemption, may have the digital points it has collected converted, after verification and calculation by the user platform, into carbon credits or Non-Tradable Carbon Credits, which may serve as a basis for carbon neutrality.

BRIEF DESCRIPTION OF THE DRAWINGS

[0011] Fig. 1 is a schematic diagram illustrating the system architecture of the present invention.

[0012] Fig. 2 is a schematic diagram illustrating the implementation flow of the method of the present invention (I).

[0013] Fig. 3 is a schematic diagram illustrating another preferred embodiment of the system architecture of the present invention (I).

[0014] Fig. 4 is a schematic diagram illustrating the implementation flow of the method of the present invention (II).

[0015] Fig. 5 is a schematic diagram illustrating the implementation flow of the method of the present invention (III).

[0016] Fig. 6 is a schematic diagram illustrating another preferred embodiment of the system architecture of the present invention (II).

[0017] Fig. 7 is a schematic diagram illustrating the implementation flow of the method of the present invention (IV).

[0018] Fig. 8 is a schematic diagram illustrating another preferred embodiment of the system architecture of the present invention (III).

[0019] Fig. 9 is a schematic diagram illustrating another preferred embodiment of the system architecture of the present invention (IV).

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

[0020] Referring to Fig. 1, the Sustainable Development Goals (SDGs) Digital Point System 1 of the present invention has a central processing module 11 as the core, with a member management module 13, a digital point module 14, a redemption module 15, and a blockchain module 16 in communicative connection with the central processing module 11. A user, upon logging in to the system, may operate the user platform 12, or alternatively may complete a communicative connection between an external information device 2 and the user platform 12, and then perform remote operations on the external information device 2.

[0021] The digital point module 14 primarily comprises a quiz unit 141, an activity record unit 142, and a consumption record unit 143. The quiz unit 141 is in the form of a user interface written as a program, configured to generate a plurality of question items for a user, when executing the quiz unit 141, to answer questions, store the answers upon completion of the quiz, and record the digital points calculated based on the answers; the plurality of question items may, for example, be automatically generated based on the SDGs target domain selected by the user. The activity record unit 142 is in the form of a user interface written as a program, configured to record and store a history of activities linked to and participated in by the user through the user platform 12. The consumption record unit 143 is in the form of a user interface written as a program, configured to record and store a history and records of consumption transactions generated by the user through the user platform 12. Furthermore, digital points may be defined, for example, such that the digital point module 14 provides different calculation weights for digital points based on different activity types.

[0022] The redemption module 15 is an execution instruction written as a program, primarily configured such that when a user executes the redemption module 15, the user may redeem the digital points held by the user, through operation, for a corresponding product or service item.

[0023] The blockchain module 16 is built on blockchain technology, and is primarily configured to perform an on-chain procedure on the various records completed by the user on the user platform 12, so as to render each record immutable and traceable. The various records include, for example, the user's quiz records, activity participation records, consumption records, and digital points; for example, an on-chain procedure may be performed on the records

of digital points so as to render the records of digital points immutable and traceable.

[0024] The member management module 13 is in communicative connection with a member database 131. The member database 131 is configured to store member data registered on the user platform 12, such as usernames, user codes, and user passwords, such that the member management module 13 may be equipped with a multi-factor authentication mechanism to enhance system security.

[0025] Referring to Fig. 2 and Fig. 1, a user may, using an external information device 2 in the user's possession, complete a communicative connection with the present invention through a step of logging in to the platform S1. After logging in, the user may proceed to a step of event operation S2, for example, selectively participating in activities provided by or linked by the system, performing a quiz, or making a purchase. Upon completing the step of event operation S2, the digital point module 14 performs a step of generating digital points S3 for the various events, generating a digital point for each of the various events; the digital points, after a step of storing digital points S4, are stored in the digital point module 14. Furthermore, the digital points are stored in a user account corresponding to the user platform 12. After the step of generating digital points S3 is completed, the generated digital points are subjected to an on-chain procedure by the blockchain module 16 before the step of storing digital points S4 is executed, so as to render the digital points immutable and traceable.

[0026] Continuing from Fig. 1 and Fig. 2, the present invention may be applied in the course of implementing the various SDGs indicators. The question items generated in the quiz unit 141 may, for example, be questions related to SDGs content, such as questions related to climate action,

conservation of marine ecosystems, and conservation of terrestrial ecosystems, allowing users to learn SDGs-related knowledge in the process of answering the quiz, and upon completion of the quiz, to obtain corresponding digital points. By way of further example, a user may, through operation of the activity record unit 142, participate in activities provided by links through the user platform 12; such activities are activities related to the Sustainable Development Goals (SDGs), such as beach cleanup and ecological environment maintenance activities, and upon completion of the activities, the user may obtain corresponding digital points. By way of yet further example, a user may, through operation of the consumption record unit 143, purchase goods or services provided by the user platform 12; such goods or services are those conforming to SDGs standards, such as the purchase of green energy, and upon completion of the transaction, the user may obtain corresponding digital points.

[0027] Referring to Fig. 3, the present invention is further in communicative connection with one third-party platform 3 (or a plurality of third-party platforms 31 to 33). The third-party platform 3 may be a corporate website or a group organization website providing goods or services; the goods or services provided by such corporate website or group organization website may be goods or services conforming to SDGs standards. One or more users may use external information devices 2 (21 to 23) in their respective possession to, after communicative connection, log in to the present invention to perform various operations (refer to Fig. 1 and Fig. 2 in conjunction).

[0028] Referring to Fig. 4 and Fig. 3, after a user completes the step of generating digital points S3 through operation of the present invention, the user may directly proceed to a step of digital point redemption S5 using the obtained digital points—that is, directly redeeming goods or services through

each third-party platform 3 (31 to 33) in communicative connection with the SDGs Digital Point System 1—or, after completing the step of generating digital points S3, the user may choose to have the digital points undergo a step of storing digital points S4, and then proceed to the step of digital point redemption S5 at a later time. In summary, a user may, after logging in to the user platform 12 of the present invention and operating (for example, executing the quiz unit 141 to perform a quiz), obtain or learn SDGs-related information, and thereby obtain digital points. After obtaining digital points, the user may further redeem goods or services at each third-party platform 3 (31 to 33) in communicative connection with the present invention; such goods or services also conform to SDGs standards. In this way, not only is a cycle of learning and redemption application formed, but the entire process is oriented toward conforming to SDGs standards, thereby achieving the purpose of taking knowledge input as the starting digital point and learning as the process, so that ordinary individuals may, through participation and interaction with the platform, absorb and acquire knowledge regarding the various indicators of the SDGs, and, in combination with enterprises and group organizations, form a cyclically interactive SDGs ecosystem, achieving the purpose of making the SDGs realizable.

[0029] Referring to Fig. 5, a user may further use digital points, fiat currency, or virtual currency to conduct a step of consumption transaction S51—such as the purchase of goods or services—at one or more consumption platforms 4 in communicative connection with the present invention. Furthermore, the goods or services provided by the consumption platform 4 also conform to SDGs standards; in this way, a cycle of consumption and supply is formed, and the entire process is oriented toward conforming to SDGs standards, enabling ordinary individuals, through the process of consumption and in

combination with enterprises and group organizations, to form a cyclically interactive SDGs ecosystem, achieving the purpose of making the SDGs realizable.

[0030] Referring to Fig. 6, the central processing module 11 of the present invention is further in communicative connection with a carbon credit conversion module 19, which is a parametric algorithm program configured to enable digital points, after being verified and calculated by the carbon credit conversion module 19, to generate a carbon credit unit—typically calculated in metric tons of carbon dioxide equivalent (tCO_2e), with 1 metric ton of carbon emission equal to 1 unit. In addition, the verification and calculation may also take the calculation of Non-Tradable Carbon Credits as the object, in order to derive a Non-Tradable Carbon Credit unit. The Non-Tradable Carbon Credits (NTCCs) referred to herein are a form of carbon credits that are non-tradable, non-purchasable, and non-transferable, primarily obtained through actual ESG emission-reduction actions, such as actual environmental actions, internal corporate carbon reduction, and public interest participation, for accumulation of Non-Tradable Carbon Credits; this ensures that ESG contributions are quantifiable, and avoids the problems of carbon credit arbitrage and greenwashing. Corporate ESG applications may, for example, serve as ESG impact data to ensure that corporate emission-reduction behaviors are genuinely verifiable, thereby enhancing the market recognition of ESG impact, effectively improving corporate ESG ratings, optimizing supply chain transparency, and supporting sustainability reporting and investment review. Furthermore, the blockchain module employs smart contract technology to ensure automated execution of digital point conversion and carbon credit or Non-Tradable Carbon Credit calculations.

[0031] Referring to Fig. 7 and Fig. 6, when a user operates the user platform 12 of the present invention and uses digital points, fiat currency, or virtual currency to complete the redemption or transaction of goods or services at a third-party platform 3 or a consumption platform 4, since the entire process conforms to SDGs standards, the third-party platform 3 and the consumption platform 4 (i.e., enterprises and group organizations) thereby accumulate a substantial quantity of digital points. They may further use the carbon credit conversion module 19 of the present invention to perform a step of converting carbon credits S6 on the digital points obtained or the emission reduction results achieved through the transaction process, for the purpose of converting carbon credits; upon conversion, the digital points are converted into carbon credit units, whereby the third-party platform 3 and the consumption platform 4 are thereby deemed to have obtained carbon credits. While and after the step of converting carbon credits S6 is conducted, the process and results thereof are subjected to an on-chain procedure by the blockchain module 16, with smart contract technology applied throughout the process to ensure the automated execution of digital point conversion and carbon credit calculation.

[0032] Referring to Fig. 8, the central processing module 11 of the present invention is further in communicative connection with an electronic ticket issuance module 17 and an NFT issuance module 18. Upon execution of the electronic ticket issuance module 17, the SDGs Digital Point System 1 issues an electronic ticket 171; such electronic ticket 171 may be, for example, a ticket for a beach cleanup event; after issuance, the electronic ticket is available for purchase by a user after logging in to the user platform 12, and the purchased electronic ticket may be used on the third-party platform 3 or the consumption platform 4. In addition, upon execution of the NFT issuance module 18, the SDGs Digital Point System 1 issues a Non-Fungible Token

(NFT) 181. The issued NFT 181 may also be an NFT 181 with conformance to SDGs standards as its objective—for example, a limited-edition NFT themed on ecological environments, or a limited-edition NFT issued on the theme of animal protection. After issuance, the NFT is available for purchase by a user after logging in to the user platform 12; the purchased NFT may be stored in a cold wallet designated by the user through communicative connection, and has the potential for appreciation and transaction in value.

[0033] Referring to Fig. 9, the central processing module 11 of the present invention is further in communicative connection with an AI carbon footprint identification module 191 and a carbon footprint record module 192. The AI carbon footprint identification module 191 employs a web crawler program in combination with Natural Language Processing (NLP); the web crawler program first actively retrieves information from all activities and event contents on the user platform 12, and the NLP then processes and confirms whether an activity or event content has a carbon footprint history and analyzes the type of carbon footprint history. The carbon footprint record module 192 then correlates the analyzed carbon footprint history with each respective activity or event and performs recording and storage of the carbon footprint history.

[0034] As described above, the SDGs Digital Point System and implementation method thereof of the present invention, primarily centered on a management system, provide an operating platform equipped with a user interface, whereby a user, after logging in to the operating platform, may obtain digital points by answering question items and completing designated tasks; such digital points may be redeemed with a supplying party for specific goods or services. Upon receipt of the digital points, the supplying party may have the management system convert the digital points, after verification and

calculation, into carbon credits, thereby serving as a basis for carbon neutrality; furthermore, through the operation of the present invention, the goals of raising awareness and encouraging the practical implementation of environmental Sustainable Development Goals may be simultaneously achieved. Accordingly, upon implementation, the present invention can indeed achieve the purpose of providing a system that takes knowledge input as the starting digital point and learning as the process, so that ordinary individuals may, through participation and interaction with the platform, absorb and acquire knowledge regarding the various indicators of the SDGs, and, in combination with enterprises and group organizations, form a cyclically interactive SDGs ecosystem, achieving the purpose of making the Sustainable Development Goals (SDGs) realizable.

[0035] It is noted that the foregoing descriptions are merely preferred embodiments of the present invention and are not intended to limit the scope of implementation of the present invention. Any equivalent changes and modifications made by persons skilled in the art without departing from the spirit and scope of the present invention shall be encompassed within the patent scope of the present invention.

[0036] Reference sign

1	SDGs Digital Point System
11	central processing module
12	user platform
13	member management module
14	digital point module
131	member database
141	quiz unit

142	activity record unit
143	consumption record unit
15	redemption module
16	blockchain module
17	electronic ticket issuance module
171	electronic ticket
18	NFT issuance module
181	Non-Fungible Token，NFT
19	carbon credit conversion module
191	AI carbon footprint identification module
192	carbon footprint record module
2	external information device
21~23	external information device
3	third-party platform
31~33	third-party platform
4	consumption platform
S1	log in to platform
S2	event operation
S3	generate digital points
S4	store digital points
S31	data on-chain
S5	digital point redemption
S6	convert carbon credits
S51	consumption transaction

What is claimed is:

1. An Sustainable Development Goals (SDGs) Digital Point System for establishing a digital point management and redemption mechanism, whereby a user, after logging in, may operate a user platform to obtain a digital point, and may further redeem the digital point for a good or a service, the system comprising:

a central processing module, configured to receive and process behavioral data of the user;

a member management module, in communicative connection with the central processing module, comprising a member database configured to store and manage data of the user;

a digital point module, in communicative connection with the central processing module, comprising at least a quiz unit, wherein the quiz unit is in the form of a user interface written as a program and is configured to generate a plurality of question items related to SDGs, so that when the user executes the quiz unit, the user may answer the questions, store the answers upon completion of the quiz, and record the digital points calculated based on the answers;

a blockchain module, in communicative connection with the central processing module, configured to perform an on-chain procedure on the records of the digital points using blockchain technology;

a redemption module, in communicative connection with the central processing module, configured, upon execution, to enable the user to communicatively connect, through the user platform, to a third-party platform, for redeeming the digital points for the goods or the services provided by the third-party platform;

a carbon credit conversion module, in communicative connection with the central processing module, wherein the carbon credit conversion module is a parametric algorithm program configured, upon execution, to verify and calculate the digital points and generate one of a carbon credit unit or a Non-Tradable Carbon Credit unit; and

an AI carbon footprint identification module in further communicative connection with the central processing module, wherein the AI carbon footprint identification module employs a web crawler program to actively retrieve information from an activity or an event content on the user platform, and in combination with Natural Language Processing (NLP), processes and confirms whether the activity or the event content has a carbon footprint history and analyzes the type of the carbon footprint history.

2. The SDGs Digital Point System according to claim 1, wherein the digital point module further comprises an activity record unit in the form of a user interface written as a program, configured to record and store a history of an activity linked to and participated in by the user through the user platform.

3. The SDGs Digital Point System according to claim 1, wherein the digital point module further comprises a consumption record unit in the form of a user interface written as a program, configured to record and store a history and records of consumption transactions generated by the user through the user platform.

4. The SDGs Digital Point System according to claim 1, wherein an electronic ticket issuance module is in communicative connection with the central processing module and, upon execution, is configured to issue an electronic ticket usable for SDGs activities.

5. The SDGs Digital Point System according to claim 1, wherein when the carbon credit conversion module is executed, the blockchain module employs a smart contract technology to ensure that the verification and calculation performed during the conversion of the digital points into carbon credits are automatically executed.

6. The SDGs Digital Point System according to claim 1, wherein an NFT issuance module is in communicative connection with the central processing module and, upon execution, is configured to issue an NFT, which is available for purchase by the user after logging in to the user platform, and wherein the purchased NFT may be stored in a cold wallet designated by the user through communicative connection.

7. The SDGs Digital Point System according to claim 1, wherein the central processing module is further in communicative connection with a carbon footprint record module, configured to correlate the analyzed carbon footprint history with the activity or the event content, and to record and store the carbon footprint history.

8. A method for implementing an SDGs Digital Point System for establishing a digital point management and redemption mechanism, whereby a user, after logging in, may operate a user platform to obtain a digital point, and may further redeem the digital point for a good or a service, the implementation method comprising:

a step of event operation, wherein the user selectively participates, on the user platform, in a quiz comprising one or a plurality of question items;

a step of generating digital points, continuing from the preceding step, wherein a digital point module generates the digital points based on the result of completing the quiz, and a blockchain module performs an on-chain procedure on the digital points;

a step of storing digital points, wherein the digital points are stored in a user account corresponding to the user;

a step wherein the user executes a redemption module to redeem the digital points at a third-party platform in communicative connection with the SDGs Digital Point System for the goods or the service;

a step of converting carbon credits, wherein the third-party platform communicatively connects to the SDGs Digital Point System, and a carbon credit conversion module within the SDGs Digital Point System verifies and calculates the digital points, and generating one of a carbon credit unit or a Non-Tradable Carbon Credit unit; and

an AI carbon footprint identification module in communicative connection with the central processing module, wherein the AI carbon footprint identification module first employs a web crawler program to actively retrieve information from an activity or an event content on the user platform, and then employs Natural Language Processing (NLP) to process and confirm whether the activity or the event content has a carbon footprint history and analyze the type of the carbon footprint history.

9. The implementation method of an SDGs Digital Point System according to claim 8, wherein the plurality of question items are automatically generated based on an SDGs target domain selected by the user.

10. The implementation method of an SDGs Digital Point System according to claim 8, wherein when the step of converting carbon credits is performed, the blockchain module employs a smart contract technology to ensure that the verification and calculation are automatically executed during the process of converting the digital points into the carbon credit unit or the Non-Tradable Carbon Credit unit.

11. The implementation method of an SDGs Digital Point System according to claim 8, wherein the digital point module provides different calculation weights for digital points based on different activity types.

12. The implementation method of an SDGs Digital Point System according to claim 8, wherein a carbon footprint record module in communicative connection with the central processing module further correlates the analyzed carbon footprint history with the activity or the event content, and records and stores the carbon footprint history.