

เอกสารแนบ 7

รายงานการตรวจสอบสัญญาอัจฉริยะ

# SE Digital Company Ltd.

Bangkok

Independent Limited Assurance Report  
on the smart contract code in its version as per  
May 7<sup>th</sup>, 2020

to the Board of Directors



# Independent Limited Assurance Report

on the smart contract code in its version as per May 7<sup>th</sup>, 2020 to the Board of Directors of SE Digital Company Ltd.

Bangkok

We have been engaged by the Board of Directors of SE Digital Company Ltd. ("SE Digital") to perform assurance procedures to provide limited assurance on the smart contract code in its version as per May 7<sup>th</sup>, 2020 of SE Digital implemented in accordance with the SE Digital's functional specification. Not subject to our engagement were all other aspects related to the smart contracts code other than the code itself.

SE Digital is operating an initial coin offering (ICO) portal and has been granted an approval by the Securities & Exchange Commission, Thailand. The smart contract code covered in this assurance engagement will be used by SE Digital on its platform in the future for the purpose of investment tokens' offerings to the Issuer in Thailand.

The smart contract code in SE Digital's platform is going to be deployed on the Tezos blockchain. The smart contract code was implemented in the responsibility of the Management of SE Digital based on SE Digital's functional specification (the "suitable Criteria").

## Inherent limitations

Security assessments cannot uncover all existing vulnerabilities; even an assessment in which no vulnerabilities are found is not a guarantee of a secure smart contract. However, code reviews enable discovery of vulnerabilities that were overlooked during development and areas, where additional security measures are necessary. In most cases, applications are either fully protected against a certain type of attack or they are completely unprotected against it. Some of the issues may affect the entire smart contract application, while some lack protection only in certain areas. This is why we carried out a source code review aimed at determining all locations that need to be fixed. Within the customer-determined timeframe, PwC has performed a review in order to discover as many vulnerabilities as possible.

The focus of our assessment was limited to the smart contract code on whether it is used in accordance with its specifications by the user meeting the criteria predefined in the specification. We draw attention to the fact that due to inherent limitations in any software development process and software product an inherent risk exists that even major failures or malfunctions can remain undetected. Further, uncertainties exist in any software product or application used during the development, which itself cannot be free from any error or failures. These preconditions can have an impact on the smart contract code and/or functions and/or operation. We did not assess the underlying blockchain infrastructure, which adds further inherent risks as we rely on the correct execution of the smart contract by the blockchain itself. Report readers should also take into account the facts that over the life cycle of any software product, changes to the product itself or to its environment, in which it is operated, can have an impact leading to operational behaviours other than initially determined in the functional specification.

As part of our limited assurance engagement, we did not check the completeness, accuracy and correctness of the machine code generated by the used compiler. The compiler was developed by a third party developer, who developed the smart contract for SE Digital. Any unintended or incorrect behaviour of the compiler can negatively affect the security, correctness and access management of the smart contract functionality.

## SE Digital's responsibility

SE Digital is responsible for setting up the functional specification and implementing the smart contract code in its version as per May 7<sup>th</sup>, 2020 in accordance with SE Digital's functional specification. This responsibility includes the design, implementation and maintenance of the internal control system related to the life cycle of the smart contract code in its version as per May 7<sup>th</sup>, 2020 that are free from material misstatement, whether due to fraud or error. Furthermore,

SE Digital is responsible for the selection and application of the fundamentals for SE Digital's functional specification and adequate record keeping.

#### **Our independence and quality control**

We are independent of SE Digital in accordance with the International Code of Ethics for Professional Accountants (including International Independence Standards) issued by the International Ethics Standards Board for Accountants (IESBA Code) that are relevant to our audit of the financial statements and other assurance engagements in Switzerland. We have fulfilled our other ethical responsibilities in accordance with the IESBA Code.

Our firm applies International Standard on Quality Control 1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

#### **Practitioner's responsibility**

Our responsibility is to perform an assurance engagement and to express a conclusion on the smart contract code in its version as per May 7th, 2020. Not subject to our engagement were all other aspects related to the smart contracts code other than the code itself as well the software compilation process and related controls. We conducted our engagement in accordance with International Standard on Assurance Engagements (ISAE) 3000 (Revised) 'Assurance engagements other than audits or reviews of historical financial information'. Those standards require that we plan and perform our procedures to obtain limited assurance whether it is faithfully implemented, in all material aspects, in accordance with SE Digital's functional specification as per May 7th, 2020.

Based on risk and materiality considerations, we performed our procedures to obtain sufficient and appropriate assurance evidence. The procedures selected depend on the assurance practitioner's judgement. A limited assurance engagement under ISAE 3000 (Revised) is substantially less in scope than a reasonable assurance engagement in relation to both the risk assessment procedures, including an understanding of internal control, and the procedures performed in response to the assessed risks. Consequently, the nature, timing and extent of procedures for gathering sufficient appropriate evidence are deliberately limited relative to a reasonable assurance engagement and therefore less assurance is obtained with a limited assurance engagement than for a reasonable assurance engagement.

We verified whether the code adheres to the functional specification provided by SE Digital.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion. Both the functional specification, which corresponds to the criteria, and the smart contract code, which corresponds to the subject matter, are included as Appendix I and II respectively.

#### **Conclusion**

Based on the work we performed, nothing has come to our attention that would cause us to believe that the smart contract code in its version as per May 7th, 2020 of SE Digital is not faithfully implemented, in all material respects, in accordance with the SE Digital's functional specification as set by SE Digital's Management.

#### **Restriction of use and purpose**

Our report is intended solely for SE Digital for use in connection with the purpose as described in the preceding paragraphs. We permit the disclosure of this report, in full only, by SE Digital, at its discretion, to Securities & Exchange Commission, Thailand, for use in connection with the purpose as described in the preceding paragraphs, without assuming or accepting any responsibility or liability to Securities & Exchange Commission, Thailand. Our report should not be distributed to or used by other parties, and we do not, in giving our opinion, accept or assume responsibility or liability for any other purpose or to any other parties to whom our report is shown or into whose hands it may come.

PricewaterhouseCoopers AG



Ralf Hofstetter



Andreas Eschbach

Zurich, 13th May 2020

Enclosure:

- Appendix I – Functional specification as provided by SE Digital
- Appendix II – Smart Contract Code as provided by SE Digital

## Appendix I – Specification as provided by SE Digital

Please refer to the file “docs\_requirements.md” of the specification provided to us by SE Digital. This file must be made accessible to the reader of this report. The file is included in our reporting package. For convenience, we included in the reporting package a non-binding version in the file “docs\_requirements.pdf”.

The file hash of the “docs\_requirements.md” file is  
3cf1e836887234a5ce4360df036f5d047ad3a322f0d8becaf00a5d52811644cd

The file hash was generated using the sha256 algorithm on an OS X operating system using the following command:

```
“shasum -p -a 256 docs_requirements.md”
```

## Appendix II – Smart contract code as provided by SE Digital

Please refer to the file “tezos-nbit\_code-c7286a1d14e268649cad294d00b04d5d722ad273.zip” of the source code provided to us by SE Digital. This file must be made accessible to the reader of this report. The file is included in our reporting package.

The file hash of the zip file “tezos-nbit\_code-c7286a1d14e268649cad294d00b04d5d722ad273.zip” is fd4120513009d36e997be97e23bb1fe60ccc8fe7115cdd7ec407e59de8834413

The file hash was generated using the sha256 algorithm on an OS X operating system using the following command:

```
“shasum -p -a 256 tezos-nbit_code-c7286a1d14e268649cad294d00b04d5d722ad273.zip”
```