**CKPC Token Management Standard Operating Procedure (SOP)**

**曹光彪書院 代碼管理標準流程**

**2020-03-25**

CKPC uses tokens to represent students for certain activities. Examples include:

* Submitting comments anonymously
* Voting or survey that require traceability to students in order to verify qualification

Token has the properties:

1. It has 14 digits (17 with delimiters) and is of the format "2020.88.99.123456".
2. It not easily guessable since all tokens do not follow any conspicuous order or sequence.
3. For 10000 objects (students), its collision probability (the chance of guessing the right token) is 10-10.
4. It is unique for each student-Report Template combination. (If a Report Template is deleted from the system, the associated tokens become obsolete.)
5. It is transient. That is, it is not saved in any file.

Tokens should be managed with care. At CKPC, a staff is designated as the Token Manager, who has the exclusive privilege to map tokens to students. Except for System Administrators, no other person has access to such linkage, thereby ensuring protection of student's identity. Token Manager must not save the tokens in any file, in order to avoid accidental leakage.

|  |  |  |
| --- | --- | --- |
| **Tasks** | **Steps and Descriptions** | **Person in charge**  |
| Token dissemination | * In the notification template (RCWeb > Report Template), a token variable <%=token%> is embedded
* The system derives a seed from the Report Template object for generating the tokens
* The tokens are sent to the associated students via emails
 | College Office  |
| Token validation | * Download the token list from the online form
* In RCWeb > Token Report, enter the list into the input field
* Select the correct Report Template
* List the token objects, which show three categories:
	+ NORMAL - traceable to a student
	+ INVALID - not traceable to any student
	+ DUPLICATE - tokens appearing more than once
* Determine the validity of the vote, comment, or participation and record it in the system
* Note: in the future, there may be different versions of tokens because of software upgrade. The correct token version (based on issue date) need to be selected in order to obtain the correct mapping
 | Token Manager |