Re: Coding Theory Question, I think

Source: http://sci.tech−archive.net/Archive/sci.math/2005−09/msg03015.html

- *From*: Thinus Pollard <thinus@xxxxxxxxxxxx>
- *Date*: Tue, 13 Sep 2005 13:15:41 +0200

Nope, I did some abstract algebra a few years ago where we did some coding theory.

The system issues tickets. Each ticket contains a PIN. This PIN needs to be unique and only I should be able to issue valid PINs.

The PIN contains an issue date, an expiry date, a unique serial number and an amount. All this data should be encoded into a 16 *digit* string.

Validation should take the following form:
1. When entered the system should check if the entered string is valid. This is easy, use 15 digits and append a check as the 16th.
2. When verified the system should check if the data inside the PIN "makes sense".

I was thinking about packing all the data into some bits and then encrypting it with a cipher (public key or symmetrical). The problem with this idea is how to map the data to a 15 digit string, without losing information? From the 16 digits you should be able to extract the information if you have the cypher keys.

I apologize if the original post was a bit vague.

regards,
T

William Elliot wrote:

> On Tue, 13 Sep 2005, Thinus Pollard wrote:
>
>> I am looking for a code that has the following properties:
>>
>> Given some data (date, unique identifier etc etc) we need to map this
>> data to 16 digit strings. We need to be able to validate the strings as
>> well.
>>
>> I think I can manage the packing of the data and validation of the
>> strings, but I'm slightly stumped on how to encode everything into 16

>> digit strings. Any pointers would be greatly appreciated.
>>
> You might explain why you need packing. For example,
> 6 numerical digits for date (forget the year 2100 problem)
> 8 alpha numeric bytes for identifier, 2 check digits.
>
> What validation is needed?
>
>> To be brutally honest, I don't even know in what I'm looking for is
>> called ;)
>
> You ask this with a wink and a smile?
> Am I to think you're putting us on?

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- ***Follow−Ups***:
  - ♦ ***Re: Coding Theory Question, I think***
    - ◊ *From:* Rusty
  - ♦ ***Re: Coding Theory Question, I think***
    - ◊ *From:* Jyrki Lahtonen