$$=K_i-\left(\left\lceil\frac{a_{ir}\cdot L_r}{n}\right\rceil-\left\lceil\frac{a_{ir}'\cdot L_r}{n}\right\rceil\right)\cdot n\cdot \binom{n}{\underset{i\;\neq\; r}{\pi}}L_i\right)^{\phi(L_r)}.$$

Let  $\pi_{i-1}^n L_i$  be a constant L. Our new key  $K_i$  is actually equal to

$$K_i - \left( \left[ \frac{a_{ir} \cdot L_r}{n} \right] - \left[ \frac{a_{ir}' \cdot L_r}{n} \right] \right) \cdot n \cdot \left( \frac{L}{L_i} \right)^{\phi(L_r)}.$$

It can be easily seen that  $K'_i$  is correct.

Thus, if  $a_{ij}$  is changed, the new key  $K_i$  can be easily recomputed.

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### 5. CONCLUDING REMARKS

In this paper we have presented a new key-lock pair mechanism. Our method is based upon the following idea. Let there be a set of n pairwise relatively prime locks  $L = \{L_1, L_2, \ldots, L_n\}$ . Then the access right

$$a_{ij} = [K_i/L_j] \mod n \text{ if } K_i = \sum_{j=1}^n [a_{ij} \cdot L_j/n] \cdot n \cdot M_j,$$

where  $M_j \mod L_i = 0$  if  $j \neq i$  and is equal to 1 if j = i. Thus we believe that an attractive research problem has been opened. Is it possible to have the most appropriate  $M_i$ s such that the representation of each key may not extend beyond 32 bits?

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# Announcement

20-22 April 1988

International Conference on Electronic Publishing, Document Manipulation and Typography, Nice, France. Call for papers

An international conference on Electronic Publishing, Document Manipulation and Typography will be held at Nice, France, 20-22 April, 1988. The Conference is being organised by INRIA, France in association with a number of sponsors. This conference may be considered as a successor to the EP 86 conference organised at the University of Nottingham, England in April 1986 by the British Computer Society. An associated exhibition will provide an opportunity for participants to see systems in action or at a prototype stage.

## **Topics**

The conference will cover all aspects of computer document preparation, text processing and printing. It will include topics such as document design, authoring systems, electronic publishing and digital typography, and it will be orientated specifically towards new ideas and techniques in these fields. Papers which should present original research work or give a comprehensive survey of a particular area - are invited on any new topic related to document processing, including the following.

- Document structures (analysis and recog-
- Document editors or formatters, integration of text, graphics and images.
- Markup languages and translation from one to another.
- Computer-based and dynamic documents.
- Procedural page description languages.
- Interfaces with other software.
- Expert systems for editing.
- Specific documents (mathematics, chemistry, humanities, music, exotic languages,
- Font design and use, visual issues.
- Electronic publishing, applications and techniques.

• Linguistic approaches and semantic structures of texts.

#### Main deadlines

- 31 July, 1987 Papers to be received by the Program Committee Chairman.
- 31 October, 1987 Notification of acceptance and mailing of instructions for preparation of the final paper.
- 31 January, 1988 Final paper received by the Proceedings Editor so that the Conference Proceedings can be available at the Con-

#### Further details

To be placed on the mailing list for this conference, please contact:

Jacques André, IRISA/INRIA EP 88, Campus de Beaulieu, F-35042 Rennes Cedex, France; or send relevant information by electronic mail to Usenet:...mcvax!inria! irisa!jandre.