Theorem. *The following three assertions are equivalent.*

(1) *The collection* $\{T^k\tilde{B}_j\}$ *forms a basis of decomposition which are* ε mod 0.

(2) *The S-code* $A=\{A_i\}$ *covers the Bernoulli scheme* (X_Z, μ_p, T), *or does not cover it, but the alphabet* Z *contains a letter* a_k *such that almost every realization can be represented (uniquely up to an indexing* j_l, *a possible shift) in the form*

$$\cdots a_kB_{j-n}a_k\cdots a_kB_{j-n+1}a_k\cdots a_kB_{j0}a_k\cdots B_{j1}\cdots a_kB_{jn'}a_k\cdots,$$

where B_{jl}, $-\infty<l<\infty$, *is a word of any kind; i.e. all "lacunae" between words of whatever kind (for some* l *there may be none) are filled by letters* a_k *in arbitrary number.*

(3) *For all letters* $a_j\in Z$, *except possibly one (the* a_k *in* 2)),

$$P(a_j)=\sum_i k_j^i t_0^{|A_i|-1}\mu_p(\tilde{A}_i),$$

where t_0 *is the smallest positive real zero of the polynomial (series)*

$$f(t)=l-t+\Sigma\mu_p(A_i)t^{|A_i|}.$$

The equality $t_0=(1-\sum\mu_p(\tilde{B}_j))^{-1}$ holds, in which the summation ranges over all words of any kind. There is coverability when all equalities in (3) are satisfied for all a_j. If k_j and q_j satisfy the conditions of Theorem 1 in [1], then we take the canonical S-code described on p. 396 in [1], and s to be the solution t_0 (see above) of the polynomial (series) $f(t)=1-t+\sum q_jt^{k_j}$. The equalities in condition (3) of the above theorem are obviously satisfied for all a_j, except possibly a_0; so that any collection k_j and q_j (p. 395) which can be realized on an S-code and Bernoulli scheme may be realized on a code and scheme for which conditions (1)–(3) of the theorem hold. It is sufficient therefore that there exist a positive root of $f(t)$, whereas coverability requires the existence of a multiple positive root, being thus a stronger condition.

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June 2, 1978

REFERENCES

[1] A. N. Livshits, *On the isomorphism problem for Bernoulli schemes*, Theory Prob. Appl., 19 (1974), pp. 394–398.

Through our own fault, the following errors were committed in the report *On homogeneous controlled Markov models with continuous time and finite or countable number of states* (this Journal, 24 (1979), pp. 156–161).

(1) In the definition of the estimate of the strategy on p. 156, it is necessary to interpret $\mathbf{P}_x^\pi$ as $\mathbf{P}_{s,x}^\pi$, the measure corresponding to the process emitted at the moment s from the state x under the strategy π reckoned from the moment s.

(2) In part A of Theorem 2, the words "the model is summable from above and $v\neq\infty$" should be replaced by "the model is summable and $v>-\infty$".

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