It follows from (18.4) that the composition

$$I \xrightarrow{\omega} [p] \xrightarrow{x} [n]$$

is in P_i. Condition (18.3), in view of $d\psi j < k$, implies that $\psi j \in \bar{P}_{xj}$. Thus $\phi = (\psi 1, \cdots, \psi p)\omega \in (\bar{P}_{x1}, \cdots, \bar{P}_{xp})\omega = (\bar{P}_1, \cdots, \bar{P}_n)x\omega \subset (\bar{P}_1, \cdots, \bar{P}_n)P_i \subset \bar{P}_i$. Consequently, $\phi \in \bar{P}_i$ as required.

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REFERENCES

ARDEN, D. N. (1961). Delayed-logic and finite-state machines. Course notes 6.531. Department of Electrical Engineering, M.I.T.

BUCHI, J. R. AND WRIGHT, J. B. (1960). "Mathematical Theory of Automata." course notes, Communications Sciences 403, University of Michigan.

CHOMSKY, N. AND SCHÜTZENBERGER, M. P. (1963). The Algebraic Theory of Context-Free Languages. *In* "Computer Programming and Formal Systems" (edited by P. Braffort and D. Hirschberg), North-Holland, Amsterdam, p. 118.

ELGOT, C. C. AND MEZEI, J. (1965). On relations defined by generalized finite automata. *IBM J. Res. Develop.* Vol. **9**.

GINSBURG, S. AND RICE, H. G. (1962). Two families of languages related to ALGOL. *J. Assoc. Comp. Mach.* **9**, p. 350.

LAWVERE, F. W. (1963). Functorial semantics of algebraic theories. *Proc. Natl. Acad. Sci. U.S.A.* **50**, 869–872.

MEZEI, J. AND WRIGHT, J. B. (1965). Generalized ALGOL-like languages. IBM Research Report RC 1528. Also to appear in *Inform. Control* as Algebraic automata and context-free sets.

RABIN, M. O, AND SCOTT, D. (1959). Finite automata and their decision problems. *IBM J. Res. Develop.* Vol. **3**.

THATCHER, J. W. AND WRIGHT, J. B. (1966). Generalized finite automata theory with an Application to a Decision Problem of second-order logic. IBM Research Report RC 1713.

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ERRATUM

Vol. **10**, No. 4 (1967), in the article entitled, "Cascade Synthesis of Finite-State Machines," by H. P. Zeiger, pp. 419–433:

Page 429, line 8, the sentence beginning, "Let D be any . . ." should read: "Let D be a similarity class of initial elements for which the cardinality of each element is maximal; line 26, "Let Q_L be $\{R \in C' : R \subset q\}$" should read: "Let Q_L be the set of blocks that replaced q in passing from C to C'"; third line from the bottom, "(3) . . . let $t = v_s{}^q x_M(p)$," should read: "(3) . . . let t be any element of Q_L contained in $v_s{}^q x_M(p)$"; line 2 from bottom should read:

"(4) if $p \in D$ and $s \in D$ and

(a) $v_s{}^q x_M v_q{}^p(q) \neq q$ let t be any element of Q_L contained in $v_s{}^q x_M v_q{}^p(q)$,

(b) $v_s{}^q x_M v_q{}^p(q) = q$ let t be $v_s{}^q x_M v_q{}^p(r)$."

Page 430, line 4, " . . . part 3 produces . . . " should read: " . . . parts 3 and 4a produce . . . "; line 5, " . . . and part 4 . . . " should read: " . . . and part 4b . . . "

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