Index

A

Ada® programming language, 78
AMRF, 38
ANSI X3.66, 25
ANSI Y14.26M (IGES), 79
ASTM Committee E-31 on Computerized Systems, 12
ASTM standards
   E 623, 13
   E 624, 16
   E 625, 16
   E 626, 16
   E 730, 13
   E 731, 16
Automation
   Distributed assembly automation, 207
Examples
   Alcoa ingot tracing system, 17, 198
   Apparel manufacturing, 207
   NBS/AMRF, 39
Factory automation
   Areas of, 32
   Assembly function, 209
Financial barriers, 105
Flexible manufacturing systems, 115
Human barriers, 109
Industrial automation (IDEF), 138
Institutional barriers, 112
   Large-scale automation, 101
   Machine utilization, 102
   Technological barriers, 99
   Integrated systems, 117

B

Bacheler, A. T., 21
Berkley, J. B., Jr., 81
Bloom, H. M., 38
Bruno, G., 115

C

Cavanaugh, W. T., 5
Communications control, advanced data procedures, 25
Computerized systems (ASTM E-31), 12
Computer languages
   Query-type syntactic approach, 152
   SEQUEL—a query type, 154
   Syntax for manufacturing, 127
Controller specification methodology, 130
Control systems
   Emulation of, 52
   For FMS systems, 65
   Hierarchy for, 170, 179
   Manufacturing planning and control software, 43
   (Real-time) for robotics, 57
   Sub-optimal, 216
   Work station for, 55

D

Data base systems, 50
   For CAD, 150
   Part geometry and production, 155
DeMartini, C., 115
Distributed automated process planning, 49
DNC systems, 21
Dwivedi, S. N., 163

E
EIA automation bulletin, 3
EIA Project 1393, 26
EIA Project 1542, 25
EIA RS-227, 24
EIA RS-232, 24
EIA RS-244, 24
EIA RS-267, 24
EIA RS-274, 23
EIA RS-281, 24
EIA RS-358, 24
EIA RS-408, 24
EIA RS-423, 23
EIA RS-431, 24
EIA RS-447, 23
EIA RS-474, 23
EIA RS-484, 24
EIA RS-491, 23
EIA RS-494, 24
EIA standardization project, 24
Engineering technology education, 229
Exchangeability of machine programs, 26
Expert systems, 54

F
Fanning, R. E., 198
Flexible manufacturing systems, 115
Fu, K. S., 150

G
Gardner, L. B., 1, 247
Grierson, D. K., 31

H
Holland, J. R., 97
Hopp, T. H., 169

I
IDEF
Advantages/disadvantages, 142
High-level planning, 145
ICAM definition, 136
Industrial automation, 138
ISO TC97/SC 16 (on Open Systems Interconnection), 88
Inspection, computer-aided, 53, 173
Integrated standards structure for automated manufacturing, 237–244
Integration
Of garment manufacturing, 207
Process control and MIS, 190
Interfaces
Between systems/users, 203, 211
Hardware, 62
Manufacturing graphics, 52
Software, 63

L
Lau, K. C., 169
Lee, Y. C., 150

M
Mackulak, G. T., 136
Management information systems, 198
Materials Requirement Planning (MRP), 158
McEwen, S. M., 61
McLean, C. R., 38
Merkel, K. G., 229
Modernization program industrial incentives (IMIP), 76
N
N/C standards, EIA standards for, 21
Network communication, 51
Newlin, D. B., Jr., 72
Nilsson, N. T., 207

P
Planning, control software, 43
Process control, functional programming for, 125
Process planning, distributed/automated, 49
Production control, 49
Productivity, White House Conference on, 77

R
Rivoira, S., 115
Robotic systems
  Decision factors, 164
  Sensor systems, 59

S
Satyanarayana, M. S., 163
Schilling, P. E., 11, 198
Sensors, machine tool, 57
Software initiatives, STARS program, 78
Software planning (E-31), 12
Standards
  Framework for hardware, 67
  Hierarchical structure for, 88
  In the future factory, 31
  Involvement of U.S. Government, 74
  N/C standards activities, 21
  Protocol elements, 68
Stuetz, J. R., 188
System integration hardware, 55

T
Technical data package, automated systems for control, 189

V
Valenzano, A., 115

W
Walter, C., 125
Waltz, M. D., 198
Work breakdown structure for automated integrated manufacturing, 85