

Index

- 1D interpolation, 18
- 2D rendition, 42
- 3D display, 42
- 3D imaging, 7, 43, 54
- 3D interpolation, 18
- 3DVIEWNIX, 11
- 100-Mbps fast Ethernet, 357

- abdominal imaging application, 297
- acceptance testing, 472
- accuracy, 500
- acoustic impedance, 279
- acoustic trackers, 79
- acquisition process, 468
- ad hoc retrieval, 376, 393
- administration, 449
- advantages of PACS, 368
- atlases, 132
- ambient illumination, 172
- ambient lighting, 431
- analysis, 9, 53
- angiography, 106
- animated hand model, 81
- arithmetic coding, 237
- ASICs, 169
- ATM, 358
- augmented reality, 77
- augmented reality in surgery, 93
- automatic routing, 379

- B-scanners, 286
- battlefield telemedicine, 325
- biased reconstruction, 231
- bidirectional interface, 447
- binary large object (BLOB), 388
- biorthogonal DWT, 260
- black level, 161
- body region, 12
- breast-imaging application, 295
- brightness control, 161

- calibration, 177
- capture images, 375
- cath lab study, 393

- cathode ray tube, 409
- CCOW, 446, 448
- CD-R, 390
- central archive architecture, 380
- cine-display, 293
- clinical applications, 294
- Clinical Context Object Workgroup, 446
- clinical data repository, 448
- color SieScape image, 295
- comparative costs, 396
- composite display, 293
- compression ratio, 223
- computational power, 286
- computed radiography, 500
- computer-supported cooperative work, 317
- computerized tomography, 7
- connectivity, 443, 446
- contrast control, 161
- contrast ratio, 411
- contrast resolution, 281, 408
- coordinate transformations, 119
- CORBAMed, 448
- cost justification, 400
- CR, 312
- CRT, 409
- CRT controls, 170
- CRT life, 170
- CRT monitors, 410
- CT, 7, 312

- Data Base Management System, 385
- data security, 476
- data volumes, 375
- database, 478
- deadzone, 231
- deformable, 52
- delineation, 26
- desktop virtual reality, 74
- diagnostic role, 417
- DICOM, 178, 312, 448
- DICOM query/retrieve software, 384
- DICOM Service Class, 445
- DICOM standard, 426, 474
- digital radiography, 7

- digital-to-analog converter, 415
- disaster recovery, 398
- discrete cosine transform (DCT), 250
- discrete wavelet transform (DWT), 259
- discretization, 18
- dispenser cathodes, 158
- display, 9, 405
- display controller, 166
- display coordinate system, 12
- display device, 405
- display device-specific image processing, 157
- display of the images, 476
- display systems, 126
- display technologies, 408
- distance learning, 321
- distortion, 180
- distributed architecture, 380
- distributed virtual reality, 77
- Doppler imaging modes, 285
- DPCM, 240
- drive voltage, 161
- DVD, 391
- DVD formats, 391

- economic, 503
- economic analysis, 470
- economies of scale, 397
- educational, 505
- electron gun, 158
- electronic teaching files, 383
- embedded encoding, 266
- endoscopes, 122
- enhancing, 15
- enhancing filter, 16
- examination and image navigation, 420
- external information systems, 483

- failure strategies, 493
- FDDI, 356
- FED, 409
- field emission displays, 409
- film, 389
- filtering operations, 15
- flicker, 165
- fMRI, 7
- frame relay, 349
- functional imaging, 123
- functional MRI, 7

- gamma, 160
- gamma correction tables, 177
- generalized programmable image processor, 287
- Golomb coding, 237
- GPII, 287
- graded composition, 12, 26
- grid drive characteristic, 159
- hand gesture recognition, 82
- hanging-togetherness, 26
- hanging-togetherness (gestalt), 13
- haptic, 130
- HDTV, 324
- head-mounted displays, 129
- Healthcare Information and Management Systems Society (HIMSS), 389
- high-brightness monitors, 411
- HIS/RIS, 497
- HL-7, 448, 474
- home monitoring, 322
- hospital information systems (HIS), 315, 367
- HSM, 373
- Huffman coding, 235
- hybrid visualization, 89

- IEEE 802.3, 352
- IHE, 473
- image manipulation, 421
- image processor, 287
- image quality, 280, 428, 504
- image registration, 291
- imaging device, 12
- immersion VR, 75
- implementation strategy, 469
- integrated solutions, 443
- Integrating the Healthcare Enterprise (IHE), 389, 473
- integration, 448
- intensity, 18
- intensity of interest, 14
- interaction, 70, 79
- interactions with HIS / RIS, 389
- interface, 446
- interpolation, 18
- interventional systems, 133
- IOI, 14
- irrelevancy, 224
- ISDN, 348
- isosurfacing methods, 27

- JPEG, 314
- JPEG 2000, 255
- JPEG-LS, 242
- justification, 496

- LAN, 354
- LANE, 359
- LCD, 409
- LCD display, 413
- level of detail algorithm, 89
- lifting, 264
- liquid crystal display, 409
- lossless JPEG, 240
- lossy JPEG, 248
- LUT, 416

- MAC, 355
- magnetic resonance imaging, 7
- magnetic tape, 392
- magnetic tracking, 79
- manipulation, 9, 52, 70
- maximum intensity projection, 43, 49
- mechanical tracking, 79
- medical education, 94
- microscopes, 121
- midpoint reconstruction, 230
- minimum sum absolute difference, 290
- MIP, 43
- MOD, 390
- modalities, 445, 484
- Modality Worklist Management, 445
- modulation transfer function, 407
- monochrome monitors, 411
- motion estimation, 290
- MPEG, 311
- MQ-coder, 268
- MR, 312
- MR angiography, 109
- MRI, 7
- MSAD, 290
- MTF, 157, 407
- multi-modality imaging, 120
- multiple distributed archives, 382
- multiple simultaneous applications, 446

- navigation, 85
- navigation of the database, 476
- near-lossless, 245
- Nearline, 371
- network, 310, 477
- noise levels, 432

- object, 12
- object oriented databases, 387
- object system, 12
- object-based registration, 25
- operating room, 140
- optical, 390
- optical tracking, 79
- organic light emitting diode displays, 409
- OSI, 342
- outcome, 505
- outcome studies, 498

- PACS, 310, 367, 405, 443, 448, 468, 496
- PACS domain, 444
- PACS implementation, 475
- PACS network, 362
- PACS workstations, 417, 486
- penetration, 281
- performance expectations, 377
- performance parameters, 180
- PET, 7
- phosphor screen, 163

- Picture Archiving and Communications Systems (PACS), 443
- pixel size, 12
- pixels, 12
- polygonal surfaces, 29
- positron emission tomography, 7
- prefetch environment, 396
- prefetching, 379
- preprocessing, 9, 13
- printers, 492
- product selection, 471
- productivity, 500
- profiling, 445
- programmability, 286
- project team, 468

- qualitative validation, 54
- quality assurance, 418
- quantitative description, 54
- quantitative validation, 55
- quantization, 229
- quantization table, 253
- query language, 386

- Radiological Society of North America (RSNA), 389
- Radiology or Hospital Information Systems (RIS or HIS), 443
- RAID technology, 370
- RAM memory, 370
- raster modulation, 166
- reading times, 499
- real-time imaging, 285
- recognition, 25
- redundancy, 224
- redundant databases, 388
- region of interest, 14
- region of interest coding, 257
- registration, 21
- registration systems, 116
- relational databases, 385
- reliability, 398
- removable storage media, 377
- rendition, 12
- research and education archive, 384
- resolution question, 406
- retrieval performance, 393
- retrieve images, 375
- review role, 418
- rigid, 52
- RIS, 367
- RIS/HIS, 448
- RIS/HIS domain, 444
- robotics, 130
- ROI, 14

- scanner coordinate system, 12
- scene, 12, 15

- scene coordinate system, 12
- scene domain, 12
- scene intensity, 12
- scene-based registration, 23
- segmentation, 25
- set-top box, 324
- shared domain, 444
- SieScape, 287
- SieScape imaging, 294
- single positron emission computed tomography, 7
- slice, 11
- slice mode, 41
- soft-copy, 499
- sound waves, 279
- source entropy, 233
- source modeling/encoding, 233
- spatial noise, 180
- spatial resolution, 180, 281, 407
- specification, 470
- SPECT, 7
- speech understanding, 84
- spot size, 173
- SQL, 448
- standard, 178
- stereoscopic, 107
- stereotactic, 111
- storage management software, 372
- storage system, 480
- store-and-forward, 308
- structure coordinate system, 12
- structure/structure system, 12
- Structured Query Language, 387
- study access, 379
- successive approximation quantization, 232
- suppressing, 15
- suppressing filter, 15
- surface rendering, 43, 49
- systems integration, 444, 450
- TCP, 343, 344
- TCP/IP, 311
- technologists, 500
- technology obsolescence, 378, 399
- telemedicine, 307
- teleradiology, 316
- telesurgery, 325
- test plan, 448
- throughput, 498
- thyroid-imaging application, 296
- tissue movement during image-guided procedures, 125
- total cost of ownership, 374
- tracking, 79
- tracking systems, 117
- training, 505
- transducer, 282
- Transmission Control Protocol, 343
- UDP, 345
- ultrasound, 110, 313
- ultrasound extended-field-of-view, 287
- ultrasound imaging, 278
- unidirectional interface, 447
- uniform threshold quantization, 230
- user interface, 422
- utilization, 501–502
- veiling glare and contrast, 180
- video, 121
- video computer monitor, 9
- video signal, 166
- videoconferencing, 308
- virtual angiography, 92
- virtual bronchoscopy, 91
- virtual endoscopy systems, 90
- virtual environments, 70
- virtual reality, 69, 128
- virtual reality display techniques, 77
- virtual reality systems in surgery, 92
- visualization, 9, 40, 48
- VOI, 14
- volume mode, 41
- volume of interest, 14
- volume rendering, 49
- Volume-growing, 89
- volume-rendering, 46
- voxel, 12, 15
- workflow management, 422
- workstation, 9, 416
- workstation environments, 428
- WORM, 390
- x-ray, 105, 312
- XFOV display modes, 293
- XFOV imaging, 287