2011 Inspec Thesaurus and Classification Codes Changes

About Thesaurus and Classification Codes
The Inspec Thesaurus and Classification scheme are valuable search tools to help you refine your search results.

The Thesaurus contains about 9,600 Index Terms and is a terminology-based subject index. The Index Terms are themselves inter-related to allow you either to find the most exact term(s) to add to your search or to broaden out your search with additional terms.

The Inspec Classification is a subject categorisation scheme containing about 3,500 Classification Codes. These codes can be used to specify a subject area without needing to specify all the sub-concepts that might be used to define it, and to restrict the results of Index Term searches which may cross subject areas.

About Revisions
Inspec regularly assesses and updates these taxonomies in line with advances in scientific and technological terminology and changes in the focus of research.

New Classification Codes may be added to allow access to formerly hard to access concepts and codes may be amended to reflect changes in terminology or to make explicit indexing practice. For 2011, fifteen new codes are being added, six of them involving the expansion of a section. Some minor textual amendments are being made, and one code pertaining to the expanded section is being retired.

Similarly, new Index Terms may be introduced to allow new concepts to be specified, to sub-divide growing research areas or to match changes in the terminology of the material being indexed. 68 new Index Terms are being introduced for 2011. In addition, about 116 concepts are being added which are synonyms or explanations, and which lead to the Index Terms to use for those concepts. There are also a small number of corrections and additions to the inter-term and code-term relationships. There are no Index Terms being retired.

The improved Thesaurus and Classification tools containing all these changes will be available in January, in time for the first update of 2011.

Changes for 2011
If your Saved Search (or Alert) contains Index Terms or Classification Codes from the following lists, you may wish to consider the related new concepts for addition into your strategy.

List of new Classification Codes linked to pre-2011 Codes

Pre 2011 Code	New Code	New Code Text
b1265F	b1265G	Digital signal processing chips
b1265F	b1265M	System-on-chip
b1265F	b1265N	Network-on-chip
b8120J	b8120K	Distributed power generation
c3260	c3260Q	Electromagnetic actuators
c3260	c3260R	Electromechanical actuators
c5130	c5137	System-on-chip
c5130	c5139	Network-on-chip
c6150N	c6190	Distributed systems software
c6150N	c6190G	Grid computing
c6150N	c6190J	Internet software
c6150N	c6190P	Parallel software
c6150N	c6190V	Ubiquitous and pervasive computing
c6150N	c6190Z	Other distributed systems software
d5	d5060	Software for office automation

List of new Index Terms linked to pre-2011 Terms

Pre 2011 Index Term	Relationship	New Index Term
3G mobile communication	Related term	long term evolution
3G mobile communication	Related term	femtocellular radio
3G mobile communication	Related term	next generation networks
4G mobile communication	Related term	long term evolution
actuators	Related term	networked control systems
actuators	Related term	ball screws
actuators	Narrow term	electromechanical actuators
ad hoc networks	Related term	cooperative communication
ad hoc networks	Narrow term	mobile ad hoc networks
aerospace components	Related term	inflatable structures
affine transforms	Related term	inverse transforms
airports	Related term	sea ports
airships	Related term	inflatable structures
analogue-digital conversion	Related term	signal conditioning circuits
antenna radiation patterns	Related term	metamaterial antennas
antenna radiation patterns	Related term	omnidirectional antennas
antennas	Narrow term	metamaterial antennas
antennas	Narrow term	omnidirectional antennas
antibacterial activity	Related term	ozonation (materials processing)
aquaculture	Related term	net structures (mechanical)
artificial intelligence	Related term	granular computing
asphalt	Related term	bitumen
audio coding	Related term	audio watermarking
audio signal processing	Related term	audio watermarking
balloons	Related term	inflatable structures
band-pass filters	Related term	UHF resonators
behavioural sciences	Related term	cultural aspects
bioacoustics	Narrow term	phonocardiography
biochemistry	Related term	microbial fuel cells
biosensors	Related term	nanomedicine
biotechnology	Related term	mineral processing

biotechnology	Related term	microbial fuel cells
bleaching (materials processing)	Related term	ozonation (materials processing)
block codes	Narrow term	space-time block codes
Bluetooth	Related term	Zigbee
boats	Related term	inflatable structures
boats	Related term	marine propulsion
braking	Related term	stick-slip
broadband networks	Related term	next generation networks
broadcasting	Narrow term	digital multimedia broadcasting
business data processing	Related term	service-oriented architecture
business data processing	Related term	cloud computing
cardiology	Related term	photoplethysmography
cardiology	Narrow term	phonocardiography
catalysis	Related term	water gas shift
cavity resonators	Related term	millimetre wave resonators
cavity resonators	Related term	microwave resonators
cavity resonators	Related term	UHF resonators
cellular radio	Related term	long term evolution
cellular radio	Related term	radio transceivers
cellular radio	Narrow term	femtocellular radio
channel coding	Related term	space-time block codes
channel coding	Related term	decode and forward communication
chemical technology	Related term	ozonation (materials processing)
chemical technology	Related term	water gas shift
CMOS integrated circuits	Related term	signal conditioning circuits
coal	Related term	flotation (process)
coal gasification	Related term	coal tar
cognitive radio	Related term	cooperative communication
coke	Related term	coal tar
computational linguistics	Related term	question answering (information retrieval)
computer aided instruction	Related term	question answering (information retrieval)
computer networks	Related term	networked control systems
computerised instrumentation	Related term	signal conditioning circuits
conducting polymers	Related term	electroactive polymer actuators
control systems	Narrow term	networked control systems
copy protection	Related term	image watermarking
copyright	Related term	audio watermarking
copyright	Related term	image watermarking
corona	Related term	ozone generators
crude oil	Related term	oil sands
crude oil	Related term	bitumen
crude oil	Related term	oil shale
crushing	Related term	mineral processing
crystal resonators	Related term	UHF resonators
current limiting reactors	Related term	superconducting fault current limiters
curvelet transforms	Related term	inverse transforms
data acquisition	Related term	signal conditioning circuits
data analysis	Related term	formal concept analysis
data compression	Related term	image watermarking
data compression	Related term	audio watermarking
data encapsulation	Related term	audio watermarking
data encapsulation	Related term	image watermarking
data mining	Related term	granular computing

data mining	Related term	formal concept analysis
decoding	Related term	amplify and forward communication
decoding	Related term	decode and forward communication
decontamination	Related term	ozonation (materials processing)
delays	Related term	networked control systems
dielectric resonators	Related term	UHF resonators
dielectric resonators	Related term	millimetre wave resonators
dielectric resonators	Related term	microwave resonators
digital audio broadcasting	Related term	digital multimedia broadcasting
digital television	Related term	set-top boxes
digital video broadcasting	Related term	set-top boxes
digital video broadcasting	Related term	digital multimedia broadcasting
direct broadcasting by satellite	Related term	digital multimedia broadcasting
direct methanol fuel cells	BroaderTerm	direct alcohol fuel cells
discharges (electric)	Related term	ozone generators
discrete transforms	Related term	inverse transforms
discrete wavelet transforms	Related term	audio watermarking
distributed control	Related term	networked control systems
diversity reception	Related term	decode and forward communication
diversity reception	Related term	space-time block codes
diversity reception	Related term	cooperative communication
diversity reception	Related term	amplify and forward communication
doors	Related term	hinges
drives	Related term	ball screws
drug delivery systems	Related term	nanomedicine
elastic deformation	Related term	compliant mechanisms
electric actuators	Narrow term	electroactive polymer actuators
electric actuators	Related term	electromechanical actuators
electric sensing devices	Related term	signal conditioning circuits
electromechanical effects	Related term	electromechanical actuators
engines	Related term	marine propulsion
environmental degradation	Related term	environmental monitoring (geophysics)
environmental engineering	Related term	environmental monitoring (geophysics)
environmental factors	Related term	oil sands
environmental factors	Narrow term	environmental monitoring (geophysics)
environmental management	Related term	environmental monitoring (geophysics)
environmental testing	Related term	environmental monitoring (geophysics)
ethical aspects	Related term	cultural aspects
fading channels	Related term	cooperative communication
fault current limiters	Narrow term	superconducting fault current limiters
file servers	Related term	virtualisation
file servers	Related term	cloud computing
filtration	Related term	mineral processing
fishing industry	Related term	net structures (mechanical)
flexible structures	Related term	inflatable structures
flexible structures	Related term	compliant mechanisms
flexible structures	Related term	net structures (mechanical)
flocculation	Related term	mineral processing

food safety	Related term	ozonation (materials processing)
formal logic	Related term	formal concept analysis
Fourier transforms	Related term	inverse transforms
freight handling	Related term	sea ports
frequency division multiple access	Related term	long term evolution
friction	Narrow term	stick-slip
fuel cell power plants	Related term	direct carbon fuel cells
fuel cell power plants	Related term	direct ethanol fuel cells
fuel cell power plants	Related term	direct alcohol fuel cells
fuel cell power plants	Related term	microbial fuel cells
fuel cells	Narrow term	direct alcohol fuel cells
fuel cells	Narrow term	direct carbon fuel cells
fuel cells	Narrow term	microbial fuel cells
fuel gasification	Narrow term	water gas shift
fuzzy set theory	Related term	formal concept analysis
fuzzy set theory	Related term	granular computing
gas-discharge tubes	Related term	ozone generators
gender issues	Related term	Digital Divide
gender issues	Related term	cultural aspects
geophysical equipment	Related term	environmental monitoring (geophysics)
geophysical techniques	Related term	environmental monitoring (geophysics)
geotechnical engineering	Related term	net structures (mechanical)
geothermal power	Related term	ground source heat pumps
goods distribution	Related term	sea ports
government policies	Related term	Digital Divide
grand unified theory	Related term	models beyond standard model
Haar transforms	Related term	inverse transforms
Hadamard transforms	Related term	inverse transforms
haemodynamics	Related term	photoplethysmography
Hankel transforms	Related term	inverse transforms
Hartley transforms	Related term	inverse transforms
heat exchangers	Related term	ground source heat pumps
heat pumps	Narrow term	ground source heat pumps
Hilbert transforms	Related term	inverse transforms
Hough transforms	Related term	inverse transforms
hydraulic control equipment	Related term	hydraulic fluids
hydraulic systems	Related term	hydraulic fluids
hydrocarbon reservoirs	Narrow term	oil sands
hydrocarbon reservoirs	Narrow term	oil shale
hydrogen production	Related term	water gas shift
image coding	Related term	image watermarking
image motion analysis	Related term	object tracking
image segmentation	Related term	object tracking
image sequences	Related term	object tracking
indoor radio	Related term	femtocellular radio
inference mechanisms	Related term	granular computing
information filtering	Related term	question answering (information retrieval)
information filters	Related term	question answering (information retrieval)
information retrieval	Narrow term	question answering (information retrieval)
information technology	Related term	Digital Divide
integrated optoelectronics	Related term	optical transceivers
intelligent actuators	Related term	electroactive polymer actuators

interactive television	Related term	set-top boxes
Internet	Related term	next generation networks
Internet	Related term	question answering (information retrieval)
Internet	Related term	service-oriented architecture
Internet	Narrow term	cloud computing
Internet	Related term	Digital Divide
Internet	Related term	networked control systems
Internet	Related term	set-top boxes
inverse problems	Related term	inverse transforms
IP networks	Related term	next generation networks
IPTV	Related term	set-top boxes
Karhunen-Loeve transforms	Related term	inverse transforms
knowledge representation	Related term	formal concept analysis
Laplace transforms	Related term	inverse transforms
large-scale systems	Related term	networked control systems
lattice theory	Related term	formal concept analysis
leaching	Related term	mineral processing
leaky wave antennas	Related term	metamaterial antennas
learning (artificial intelligence)	Related term	granular computing
lightweight structures	Related term	inflatable structures
local area networks	Related term	networked control systems
lubricating oils	Related term	hydraulic fluids
lubrication	Related term	stick-slip
machining chatter	Related term	stick-slip
manufacturing processes	Narrow term	mineral processing
manufacturing processes	Narrow term	ozonation (materials processing)
manufacturing processes	Narrow term	flotation (process)
marine communication	Narrow term	underwater optical wireless communication
marine engineering	Related term	marine propulsion
marine systems	Related term	marine propulsion
marine telemetry	Related term	underwater optical wireless communication
marine vehicles	Related term	marine propulsion
mechanical contact	Related term	stick-slip
mechanical control equipment	Related term	ball screws
mechanical products	Narrow term	ball screws
mechanical products	Narrow term	hinges
membranes	Related term	microbial fuel cells
metamaterials	Related term	metamaterial antennas
microactuators	Related term	electroactive polymer actuators
micromechanical devices	Related term	compliant mechanisms
micromechanical devices	Related term	electromechanical actuators
micromechanical resonators	Related term	UHF resonators
microorganisms	Related term	microbial fuel cells
microsensors	Related term	signal conditioning circuits
microstrip antennas	Related term	metamaterial antennas
microstrip antennas	Related term	omnidirectional antennas
microstrip resonators	Related term	microwave resonators
microstrip resonators	Related term	UHF resonators
microwave antennas	Related term	metamaterial antennas
microwave devices	Narrow term	microwave resonators
microwave filters	Related term	microwave resonators
microwave measurement	Related term	microwave resonators
millimetre wave devices	Narrow term	millimetre wave resonators
millimetre wave filters	Related term	millimetre wave resonators
MIMO communication	Related term	long term evolution

MIMO communication	Related term	amplify and forward communication
MIMO communication	Related term	cooperative communication
MIMO communication	Related term	space-time block codes
mineral processing industry	Related term	mineral processing
minerals	Related term	mineral processing
mining	Related term	flotation (process)
mining	Related term	mineral processing
mining industry	Related term	flotation (process)
mining industry	Related term	mineral processing
mobile communication	Related term	digital multimedia broadcasting
mobile handsets	Related term	radio transceivers
mobile radio	Narrow term	mobile ad hoc networks
mobile radio	Related term	cooperative communication
mobile radio	Related term	radio transceivers
mobile radio	Narrow term	long term evolution
mobile television	Related term	digital multimedia broadcasting
molten carbonate fuel cells	Related term	direct carbon fuel cells
monitoring	Narrow term	environmental monitoring (geophysics)
monopole antennas	Related term	omnidirectional antennas
motion estimation	Related term	object tracking
multimedia communication	Narrow term	digital multimedia broadcasting
multimedia communication	Related term	set-top boxes
multimedia communication	Related term	next generation networks
nanobiotechnology	Narrow term	nanomedicine
nanoparticles	Related term	nanomedicine
natural gas technology	Related term	oil shale
natural language interfaces	Related term	question answering (information retrieval)
natural language processing	Related term	question answering (information retrieval)
naval engineering	Related term	marine propulsion
networks (circuits)	Narrow term	signal conditioning circuits
object detection	Related term	object tracking
object recognition	Related term	object tracking
OFDM modulation	Related term	space-time block codes
OFDM modulation	Related term	long term evolution
OFDM modulation	Related term	radio transceivers
oil refining	Related term	oil shale
oil refining	Related term	oil sands
oils	Related term	hydraulic fluids
ontologies (artificial intelligence)	Related term	formal concept analysis
open systems	Related term	service-oriented architecture
optical communication	Narrow term	underwater optical wireless communication
optical fibre communication	Related term	optical transceivers
optical fibre LAN	Related term	passive optical networks
optical fibre networks	Related term	passive optical networks
optical fibre networks	Related term	next generation networks
optical fibre subscriber loops	Narrow term	passive optical networks
optical links	Related term	underwater optical wireless communication
optical modulation	Related term	underwater optical wireless communication
optical receivers	Narrow term	optical transceivers
optical tracking	Related term	object tracking

optical transmitters	Narrow term	optical transceivers
organic compounds	Related term	microbial fuel cells
organic compounds	Narrow term	coal tar
organic compounds	Narrow term	bitumen
overcurrent protection	Related term	superconducting fault current limiters
ozone	Related term	ozone generators
paper industry	Related term	flotation (process)
passive filters	Related term	UHF resonators
patient diagnosis	Related term	phonocardiography
patient monitoring	Related term	photoplethysmography
patient monitoring	Related term	phonocardiography
personal area networks	Narrow term	Zigbee
petroleum industry	Related term	oil shale
petroleum industry	Related term	oil sands
pharmaceutical technology	Related term	ozonation (materials processing)
piezoelectric actuators	Related term	electroactive polymer actuators
plasma applications	Related term	ozone generators
plasma devices	Related term	ozone generators
plethysmography	Narrow term	photoplethysmography
pneumodynamics	Related term	photoplethysmography
pollution	Related term	environmental monitoring (geophysics)
polymers	Related term	electroactive polymer actuators
position control	Related term	ball screws
power system protection	Related term	superconducting fault current limiters
production equipment	Narrow term	ozone generators
production materials	Narrow term	hydraulic fluids
propellers	Related term	marine propulsion
propulsion	Narrow term	marine propulsion
protocols	Related term	next generation networks
protocols	Related term	amplify and forward communication
protocols	Related term	decode and forward communication
protocols	Related term	Zigbee
proton exchange membrane fuel cells	Related term	direct ethanol fuel cells
proton exchange membrane fuel cells	Related term	direct alcohol fuel cells
Q-factor	Related term	UHF resonators
Q-factor	Related term	millimetre wave resonators
Q-factor	Related term	microwave resonators
quality of service	Related term	next generation networks
quantum Hall effect	Related term	topological insulators
quarrying industry	Related term	mineral processing
query formulation	Related term	question answering (information retrieval)
query processing	Related term	question answering (information retrieval)
radar tracking	Related term	object tracking
radiation monitoring	Related term	environmental monitoring (geophysics)
radio networks	Related term	decode and forward communication
radio networks	Related term	cooperative communication
radio networks	Related term	amplify and forward

		communication
radio receivers	Narrow term	radio transceivers
radio tracking	Related term	object tracking
radio transmitters	Narrow term	radio transceivers
radiocommunication	Related term	cooperative communication
radiowave propagation	Related term	femtocellular radio
Radon transforms	Related term	inverse transforms
resonators	Narrow term	millimetre wave resonators
resonators	Narrow term	microwave resonators
resonators	Narrow term	UHF resonators
roofs	Related term	inflatable structures
rough set theory	Related term	formal concept analysis
rough set theory	Related term	granular computing
routing protocols	Related term	mobile ad hoc networks
routing protocols	Related term	vehicular ad hoc networks
sand	Related term	oil sands
satellite tracking	Related term	object tracking
search engines	Related term	question answering (information retrieval)
security of data	Related term	image watermarking
seizure	Related term	stick-slip
sensors	Related term	networked control systems
separation	Related term	flotation (process)
separation	Related term	mineral processing
servomechanisms	Related term	ball screws
shapes (structures)	Narrow term	inflatable structures
shapes (structures)	Narrow term	net structures (mechanical)
ships	Related term	marine propulsion
sieving	Related term	mineral processing
signal processing	Related term	signal conditioning circuits
signal processing equipment	Related term	signal conditioning circuits
sliding friction	Related term	stick-slip
social aspects of automation	Narrow term	Digital Divide
social sciences	Related term	cultural aspects
socio-economic effects	Narrow term	cultural aspects
software architecture	Narrow term	service-oriented architecture
software radio	Related term	radio transceivers
solar activity	Narrow term	solar coronal mass ejections
solar corona	Narrow term	solar coronal mass ejections
solar prominences	Related term	solar coronal mass ejections
solar wind	Related term	solar coronal mass ejections
solid oxide fuel cells	Related term	direct carbon fuel cells
sonar tracking	Related term	object tracking
space heating	Related term	ground source heat pumps
space-time codes	Related term	amplify and forward communication
space-time codes	Narrow term	space-time block codes
space-time codes	Related term	cooperative communication
spin Hall effect	Related term	topological insulators
spin-orbit interactions	Related term	topological insulators
steam reforming	Related term	water gas shift
steganography	Related term	image watermarking
sterilisation (microbiological)	Related term	ozonation (materials processing)
stiction	Related term	stick-slip
structural engineering	Related term	inflatable structures
structural engineering	Related term	net structures (mechanical)
superconducting devices	Narrow term	superconducting fault current limiters

superconducting microwave devices	Related term	microwave resonators
superconducting resonators	Related term	microwave resonators
surface acoustic wave resonators	Related term	UHF resonators
surface conductivity	Related term	topological insulators
surface states	Related term	topological insulators
syngas	Related term	water gas shift
target tracking	Related term	object tracking
technology transfer	Related term	Digital Divide
telecommunication	Narrow term	decode and forward communication
telecommunication	Narrow term	amplify and forward communication
telecommunication	Narrow term	cooperative communication
telecommunication network management	Narrow term	next generation networks
telecommunication network routing	Related term	vehicular ad hoc networks
telecommunication network routing	Related term	mobile ad hoc networks
telecommunication network routing	Related term	Zigbee
telecommunication network topology	Related term	vehicular ad hoc networks
telecommunication network topology	Related term	Zigbee
telecommunication network topology	Related term	mobile ad hoc networks
telecommunication security	Related term	mobile ad hoc networks
telecommunication security	Related term	Zigbee
telecommunication security	Related term	vehicular ad hoc networks
telecommunication services	Related term	next generation networks
telecommunication standards	Narrow term	Zigbee
telecommunication standards	Related term	long term evolution
television equipment	Narrow term	set-top boxes
television receivers	Related term	set-top boxes
terrestrial heat	Related term	ground source heat pumps
text analysis	Related term	question answering (information retrieval)
thin wall structures	Related term	inflatable structures
tracking	Narrow term	object tracking
transceivers	Related term	Zigbee
transceivers	Narrow term	radio transceivers
transceivers	Narrow term	optical transceivers
transforms	Narrow term	inverse transforms
UHF devices	Narrow term	UHF resonators
UHF filters	Related term	UHF resonators
ultra wideband antennas	Related term	omnidirectional antennas
ultraviolet sources	Related term	ozone generators
underwater optics	Related term	underwater optical wireless communication
underwater vehicles	Related term	marine propulsion
unified gauge models	Narrow term	models beyond standard model
unsupervised learning	Related term	formal concept analysis
video coding	Related term	image watermarking
video coding	Related term	set-top boxes
video coding	Related term	digital multimedia broadcasting

video signal processing	Related term	object tracking
virtual enterprises	Related term	virtualisation
virtual storage	Related term	virtualisation
volume measurement	Related term	photoplethysmography
wastewater	Related term	microbial fuel cells
wastewater treatment	Related term	ozonation (materials processing)
wastewater treatment	Related term	flotation (process)
water treatment	Related term	ozonation (materials processing)
watermarking	Narrow term	audio watermarking
watermarking	Narrow term	image watermarking
waterproofing	Related term	bitumen
wavelength division multiplexing	Related term	optical transceivers
wavelength division multiplexing	Related term	passive optical networks
wavelet transforms	Related term	inverse transforms
wavelet transforms	Related term	audio watermarking
Web services	Related term	service-oriented architecture
Web services	Related term	cloud computing
wireless channels	Related term	amplify and forward communication
wireless LAN	Related term	radio transceivers
wireless LAN	Related term	Zigbee
wireless sensor networks	Related term	Zigbee
wires	Related term	net structures (mechanical)
Z transforms	Related term	inverse transforms