

System Requirements vs. Functional Block Requirements

	F000	Internal states available externally
	F001	Supervisory Station
	F001.00	Error or failure alarms
	F001.01	Send work tasks
	F001.02	Receive robot location
	F001.03	Interact with wired
	F001.04	Request and receive management data
	F001.05	Keep track of completed tasks
	F001.06	Controls start/stop of shift
	F001.07	User I/O
	F002	Wired Communication
	F002.00	From Supervisory to Wireless
	F002.01	From Wireless to Wired and back to Wireless
	F002.02	From Wireless to Supervisory
	F002.03	Ability to retransmit to Wireless or Supervisory
	F002.04	Ability to retransmit from Wireless and Supervisory
	F003	Wireless Communication
	F003.00	Allow Tx, Rx between ceiling and robot
	F003.01	Ability to communicate and bridge with wired
	F003.02	Addressable (node and robot)
	F003.03	Branch data with central control on robot
	F003.04	Communication: robot - ceiling - robot
	F003.05	Make location available to navigation
	F003.06	Obtain current location from Navigation
	F004	Navigation
	F004.00	Accepts destination commands
	F004.01	Position from wireless, movements to wireless
	F004.02	Decision on how to final from current
	F004.03	Give motor control requests for movement
	F004.04	Know map of mine
	F004.05	Completed movements from motor control
	F005	Motor Control
	F005.00	Follow tape and steer
	F005.01	Take requests from Navigation
	F005.02	Issue control movements
	F005.03	Phaic Shutoff
	F005.04	Bump Sensor
	F005.05	Inform Navigation
	F005.06	Determines speed of motors
	F005.07	Respond if off tape
	F006	Power Monitoring/Distribution
	F006.00	Passively distribute
	F006.01	Inform of low battery
	F006.02	Current overdraw
	F006.03	Low battery alarm
	F007	Sanity
	F007.00	Sanity system
	F008	Central Control
	F008.00	Transmit and receive
	F008.01	Issues mine assignments
	F008.02	Control system restart
	F008.03	Receive faults
	F008.04	Communicate will all robot subsystems
	F008.05	Handshake with sanity
	F008.06	Manages shift status
	F008.07	Manages supervisory commands
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