

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
R000			
R001			
R002			
R003			
R004			
R005			
R006			
R007			
R008			
R009			
R010			
R011			
R013			

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F008.08	Manages startup position reports