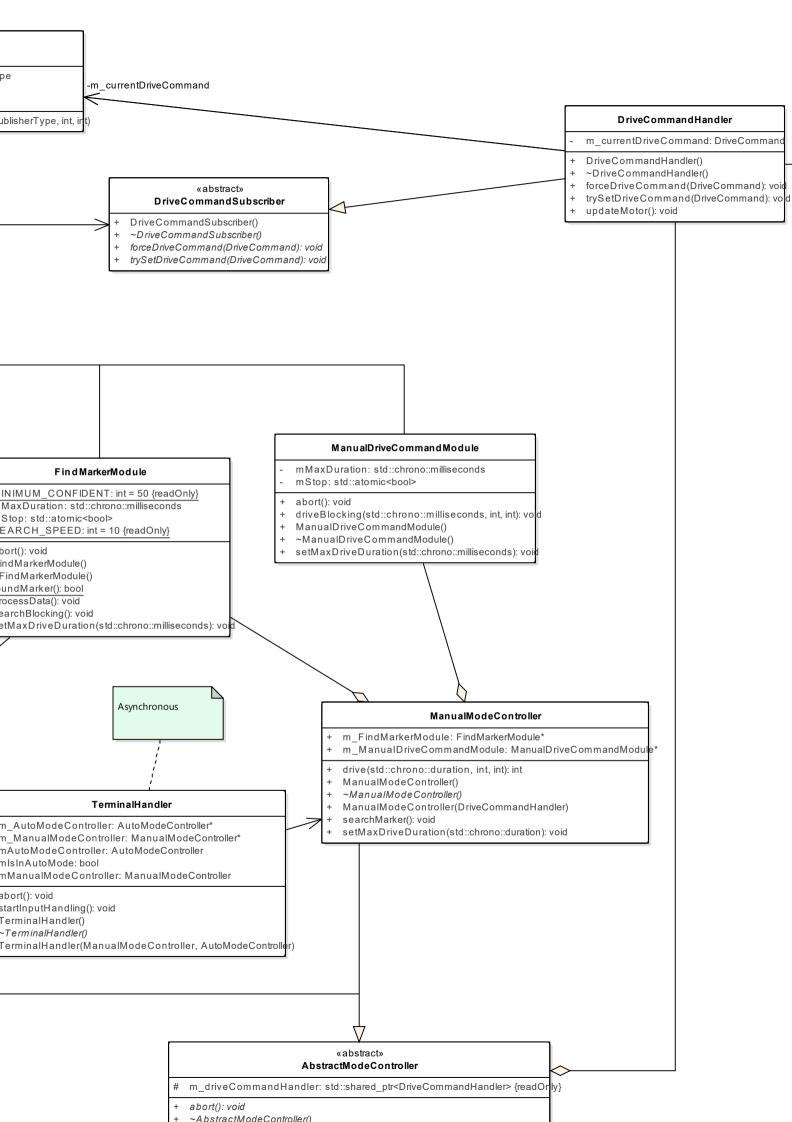
«Enumeration» DiagnosticLevel «enumeration» «struct» DriveCommandPublisherType DriveCommand DIAG\_ERROR = 0 DIAG\_WARNING FIND MARKER source: DriveCommandPublisherTy DIAG INFO FOLLOW MARKER speed: int DIAG\_DEBUG OBSTACLE\_AVOIDANCE steering: int DIAG\_VERBOSE MANUAL COMMAND DriveCommand(DriveCommandP NO COMMAND «abstract» **DriveCommandPublisher**  $drive Command Publisher Type: Drive Command Publisher Type \ \{read Only\}$ subscribers: std::vector<std::shared\_ptr<DriveCommandSubscriber> > addSubscriber(std::shared ptr<DriveCommandSubscriber>): void ~DriveCommandPublisher() forceSubscribers(int, int): void updateSubscribers(int, int): void **PIDController** m\_d: double Follow Marker Module m\_dt: double m error: double m currentMarkerld: int m\_errorDot: double m\_distanceController: PIDControlle m m\_i: double m\_followsMarker: bool Obstacle Avoidance Module m\_integralError: double m setDistance: double S m\_maxVal: double  $m\_steeringController: PIDControlle$ ObstacleAvoidanceModule() m\_minVal: double а ~ObstacleAvoidanceModule FollowMarkerModule() m\_p: double F processData(): void ~FollowMarkerModule() calculate(double): double processData(): void fc PIDController(double, double, double, double, double, double) setDistance(double): void p ~PIDController() setMarkerId(int): void S «abstract» **DataProcessModule** AutoModeController m SensorManager: SensorManager\* m\_FindMarkerModule: FindMarkerModule\* mSensorManager: std::shared\_ptr<SensorManagerPimpl> m\_FollowMarkerModule: FollowMarkerModule\* DataProcessModule() m\_ObstacleAvoidanceModule: ObstacleAvoidanceModul ~DataProcessModule() AutoModeController() DataProcessModule(std::shared\_ptr<SensorManagerPimpl>) ~AutoModeController() processData(): void AutoModeController(DriveCommandHandler) setDistance(int): void step(): void SensorManager m Pimpl: std::shared ptr<SensorManagerPimp getDebugDisplaySurface(): struct SDL\_Surface\* getDepth(int, int): double getFps(): float FileLogger getInstance(): SensorManager\* getMarkerList(): std::vector<MarkerInfo> m\_logFile: FILE\* getSensorHeight(): int m\_messageQueue: std::queue<std::string getSensorWidth(): int

~FileLogger()

operator=(SensorManager&): SensorManager&



## DriveController

- # m\_Pimpl: std::unique\_ptr<DriveControllerPimp
- + DriveController(DriveController&)
- # DriveController()
- # ~DriveController()
  + getInstance(): DriveController\*
- + getTestMode(): bool {query} + operator=(DriveController&): DriveController&
- + setTestMode(bool): void
- + step(): void + updateCon updateController(int, int): bool
- updateDirect(int, int): bool updateDirectMotor(int, int): bool

~SensorManager() getInstance(): FileLogger& log(std::string): void =(FileLogger&): FileLogger& operator «struct» MarkerInfo Logging m\_Confidence: int log(DiagnosticLevel, char\*, int, char\*, ...): voi m\_Marker: BoundingBox setMaxLevel(DiagnosticLevel): void +m\_Marker **BoundingBox** m\_Height: int  $m\_IsEmpty:bool$ m\_PenColor: Color m RegionID: int m\_Width: int m\_X: int m\_Y: int Color areaLt(BoundingBox&, BoundingBox&): bool m\_B: unsigned char ~BoundingBox() m\_G: unsigned char BoundingBox() m\_R: unsigned char #m\_PenColor BoundingBox(int, int, int, int, int) b(): unsigned char {query} draw(struct SDL\_Surface\*): void ~Color() drawMarker(struct SDL\_Surface\*): void getArea(): int {query} Color() getHeight(): int {query} Color(unsigned char, unsigned char, unsigned char) getRegionID(): int {query} g(): unsigned char {query} getWidth(): int {query} r(): unsigned char {query} grow(int): void

FileLogger()

flushLogs(): void

FileLogger(FileLogger&)

runonce(), booi

SensorManager()

SensorManager(SensorManager&)

isOverlapping(BoundingBox&): bool {query}

xLt (Bounding Box &, Bounding Box &): bool

yLt(BoundingBox&, BoundingBox&): bool

join(BoundingBox&): void
setPen(Color): void
x(): int {query}

y(): int {query}

## Diagnostics

- log(DiagnosticLevel, char\*, int, char\* const, ...): void setMaxLevel(DiagnosticLevel): void