<https://sdk-forum.dji.net/hc/zh-cn/articles/34845795564825-%E5%A6%82%E4%BD%95%E4%BD%BF%E7%94%A8wpmzSDK%E5%8E%BB%E7%94%9F%E6%88%90kmz%E6%96%87%E4%BB%B6>

WaylineTemplateWaypointInfo是存储航点和航点动作的模板类。下面是WaylineTemplateWaypointInfo属行介绍。

*/\*\*  
 \* 自由航点,非必填,航向模式,Placemark可重新配置该值，*即wpml:globalWaypointHeadingParam *\*/*WaylineWaypointYawParam globalYawParam;  
Boolean isTemplateGlobalYawParamSet = false;  
*/\*\*  
 \* 自由航点,非必填,gimbal航向模式,Placemark可重新配置该值  
 \*/*WaylineWaypointGimbalHeadingParam globalGimbalHeadingParam;  
Boolean isTemplateGlobalGimbalHeadingParamSet = false;  
*/\*\*  
 \* 自由航点,转弯模式参数,Placemark可重新配置该值,当是协调转弯时,每个点需要设置转弯半径  
即wpml:globalWaypointTurnMode  
 \*/*WaylineWaypointTurnMode globalTurnMode = WaylineWaypointTurnMode.*UNKNOWN*;  
Boolean isTemplateGlobalTurnModeSet = false;  
*/\*\*  
 \* 必填, 航段是否为直线  
 \*/*Boolean useStraightLine = false;  
*/\*\*  
 \* 自由航点,全局航点动作，非必需（对应startActionGroup)  
 \*/*WaylineActionGroup globalAction;  
Boolean isGlobalActionSet = false;  
*/\*\*  
 \* 非必填,自由航点,全局航线飞行编辑高度,根据heightmode,表示意义不同,每个航点的实际飞行高度,在航点中写入  
 \*/*Double globalFlightHeight = 0d;  
Boolean isGlobalFlightHeightSet = false;  
*/\*\*  
 \* 自由航点,Placemark  
 \*/*List<WaylineWaypoint> waypoints = new ArrayList<WaylineWaypoint>();  
*/\*\*  
 \* 自由航点,动作  
 \*/*List<WaylineActionGroup> actionGroups = new ArrayList<WaylineActionGroup>();  
*/\*\*  
 \* 非必填,航线云台控制参数，即wpml:gimbalPitchMode  
 \*/*WaylineWaypointPitchMode pitchMode = WaylineWaypointPitchMode.*UNKNOWN*;  
*/\*\*  
 \* 是否开启标定飞行  
 \*/*Boolean caliFlightEnable = false;

WaylineWaypoint和WaylineActionGroup即为航点任务中最为重要和关键的航点和动作组。下面是WaylineWaypoint所含属性：

*/\*\*  
 \* 必填，航点序号，不可重复  
 \*/*Integer waypointIndex = 0;  
*/\*\*  
 \* 必填，航点位置  
 \*/*WaylineLocationCoordinate2D location;  
*/\*\*  
 \* 航点高度  
 \*/*Double height = 0d;  
*/\*\*  
 \* 是否使用全局高度；WaylineCoordinateParam中的globalFlightHeight  
 \*/*Boolean useGlobalFlightHeight = false;  
*/\*\*  
 \* 航点使用的椭球高  
 \*/*Double ellipsoidHeight = 0d;  
*/\*\*  
 \* 非必填,航向参数。对应<wpml:waypointHeadingParam>  
 \*/*WaylineWaypointYawParam yawParam;  
Boolean isWaylineWaypointYawParamSet = false;  
*/\*\*  
 \* 是否使用全局heading设置,来源于:全局的WaylineTemplateWaypointInfo中的globalYawParam  
 \*/*Boolean useGlobalYawParam = false;  
  
WaylineWaypointGimbalHeadingParam gimbalHeadingParam;  
Boolean isWaylineWaypointGimbalHeadingParamSet = false;  
*/\*\*  
 \* 是否使用全局heading设置,来源于:全局的WaylineTemplateWaypointInfo中的globalHeadingParam  
 \*/*Boolean useGlobalGimbalHeadingParam = false;  
*/\*\*  
 \* 非必填,转弯参数，对应<wpml:waypointTurnParam>  
 \*/*WaylineWaypointTurnParam turnParam;  
Boolean isWaylineWaypointTurnParamSet = false;  
*/\*\*  
 \* 是否使用全局WaylineWaypointTurnParam,来源于:全局的WaylineTemplateWaypointInfo中的WaylineWaypointTurnMode  
 \*/*Boolean useGlobalTurnParam = false;  
*/\*\*  
 \* 非必填,航点巡航速度，单位 m/s  
 \*/*Double speed = 0d;  
*/\*\*  
 \* 是否使用全局速度,全局速度来自:autoFlightSpeed  
 \*/*Boolean useGlobalAutoFlightSpeed = false;  
*/\*\*  
 \* 必填, 航段是否为直线  
 \*/*Boolean useStraightLine = false;  
*/\*\*  
 \* 云台俯仰角度  
 \*/*Double gimbalPitchAngle = 0d;  
*/\*\*  
 \* 该航点是否使用全局动作  
 \*/*Boolean useGlobalActionGroup = false;  
*/\*\*  
 \* 表示该点是否为不可向上返航点，仅用于机场  
 \*/*Boolean isRisky = false;

WaylineActionGroup的属性如下：

Integer groupId = 0; //动作组序号，必填且唯一  
Integer startIndex = 0;//开始航点序号  
Integer endIndex = 0;//结束航点序号  
WaylineActionTrigger trigger;//动作触发器  
List<WaylineActionNodeList> nodeLists = new ArrayList<WaylineActionNodeList>();//动作树，决定动作执行顺序  
List<WaylineActionInfo> actions = new ArrayList<WaylineActionInfo>();//航点动作

WaylineActionNodeList管理了一个WaylineActionTreeNode列表。下面是WaylineActionTreeNode的属性介绍：

//节点类型。LEAF表示当前节点为子节点，SEQUENCE表示顺序执行，可以用在父节点。  
WaylineActionsRelationType nodeType = WaylineActionsRelationType.*UNKNOWN*;   
Integer childrenNum = 0;//子节点数量  
Integer actionIndex = 0;//对应动作序号

WaylineActionInfo存储了航点动作类型和动作参数，用于表示动作执行内容。下面是WaylineActionInfo的属性介绍：

Integer actionId = 0;//动作序号  
WaylineActionType actionType = WaylineActionType.*UNKNOWN*;//动作类型。根据动作类型，使用下面对应的动作参数。  
*/\*\*  
 \* 相机单拍  
 \*/*ActionTakePhotoParam takePhotoParam;  
*/\*\*  
 \* 开始录像  
 \*/*ActionStartRecordParam startRecordParam;  
*/\*\*  
 \* 结束录像  
 \*/*ActionStopRecordParam stopRecordParam;  
*/\*\*  
 \* 对焦  
 \*/*ActionFocusParam focusParam;  
*/\*\*  
 \* 变焦  
 \*/*ActionZoomParam zoomParam;  
*/\*\*  
 \* 自定义文件或文件夹名  
 \*/*ActionCustomDirNameParam customDirNameParam;  
*/\*\*  
 \* 开始定时拍  
 \*/*ActionStartTimeLapseParam startTimeLapseParam;  
*/\*\*  
 \* 结束定时拍  
 \*/*ActionStopTimeLapseParam stopTimeLapseParam;  
*/\*\*  
 \* 云台旋转  
 \*/*ActionGimbalRotateParam gimbalRotateParam;  
*/\*\*  
 \* 均匀转云台  
 \*/*ActionGimbalEvenlyRotateParam gimbalEvenlyRotateParam;  
*/\*\*  
 \* 开始摆拍  
 \*/*ActionStartSmartObliqueParam startSmartObliqueParam;  
*/\*\*  
 \* 关闭摆拍  
 \*/*ActionStopSmartObliqueParam stopSmartObliqueParam;  
*/\*\*  
 \* 悬停  
 \*/*ActionAircraftHoverParam aircraftHoverParam;  
*/\*\*  
 \* 飞机转yaw  
 \*/*ActionAircraftRotateYawParam aircraftRotateYawParam;  
*/\*\*  
 \* 精准拍照  
 \*/*ActionAccuratePhotoParam accuratePhotoParam;  
*/\*\*  
 \* 点云开关  
 \*/*ActionRecordPointCloudParam recordPointCloudParam;  
*/\*\*  
 \* PSDK自定义动作  
 \*/*ActionPSDKParam psdkParam;  
*/\*\*  
 \* 飞机标定动作  
 \*/*ActionAircraftCaliParam aircraftCaliParam;  
*/\*\*  
 \* 开始连拍  
 \*/*ActionStartContinuousShootingParam startContinuousShootingParam;  
*/\*\*  
 \* 结束连拍  
 \*/*ActionStopContinuousShootingParam stopContinuousShootingParam;  
*/\*\*  
 \* 农业-打开喷洒  
 \*/*ActionSprayOpenParam sprayOpenParam;  
*/\*\*  
 \* 农业-关闭喷洒  
 \*/*ActionSprayCloseParam sprayCloseParam;  
*/\*\*  
 \* 农业-定量喷洒  
 \*/*ActionSprayCapacityParam sprayCapacityParam;  
*/\*\*  
 \* 农业 - 按角速度转yaw   
 \*/*ActionAircraftRotateFollowSpeedParam aircraftRotateFollowSpeedParam;  
*/\*\*  
 \* 低光智能拍照  
 \*/*ActionLowLightSmartShootingParam lowLightSmartShootingParam;  
*/\*\*  
 \* 定向拍照  
 \*/*ActionOrientedPhotoParam orientedPhotoParam;