QThread

MenuBar

- actionOuvrirVideo: QAction
- actionSauvegarderVideo: QAction
- actionSauvegarderDonnees: QAction
- actionInformationObjet: QAction
- actionDeplacement: QAction

QMainWindow

Point

- center: Point2f
- currentTime: time
- currentFrame: int

+ Point(Point2f, int)
+ ~Point()

Save

- outputVideo: VideoWriter
- frameSize: Size
- frameRate: int
- videoPath: QString
- dataPath: QString

+ Save(QString VideoPath, QString DataPath, int frameRate, Size frameSize)
+ ~Save()
+ SaveVideo(QImage): void
+ SaveCoordinate(Point &): void
+ SaveCommentaire(QString commentaire, int currentFrame): void

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Player

- stop: bool
- Mutex: QMutex
- condition: QWaitCondition
- capture: VideoCapture *
- frame: Mat
- RGBframe: Mat
- frameRate: int
- startframe: int
- finframe: int
- img: QImage
- saveVideoPath: QString
- saveDataPath: QString
- frameSize: Size
- commentaire: QString
- deplacementmax: int
- objectChoose: Mat
- currentObject: Mat

+ Player()
+ ~Player()

+ loadVideo(string fileName): bool
+ Play(): void
+ Stop(): void
+ isStopped(): bool

+ getFrameRate(): double
+ getCurrentFrame: double
+ setCurrentFrame(int frameNumber): void
+ getNumberOfFrames(): double
+ setStartFrame(int): void
+ setFinFrame(int): void
+ showImage(int frameNumber): QImage

+ setSavePath(QString): void
+ getVideoSize(): Size
+ setCommentaire(QString): void
+ getCommentaire(): QString
+ setDeplacementMax(int): void
+ setObjectChoose(Mat): void
+ getCurrentObject(): Mat

run(): void
sleep(int ms): void

signals:
-processedImage(const QImage &image)

MainWindow

- videoLbl: QLabel
- videoSlider: QSlider
- currentLabel: QLabel
- totalLabel: QLabel
- backwardButton: QPushButton
- forwardButton: QPushButton
- playButton: QPushButton
- debutButton: QPushButton
- finButton: QPushButton
- coordinateList: QListView
- commentaireText: QTextEdit
- confirmeButton: QPushButton
- trajectoireCheck: QCheckBox
- menuBar: QMenuBar
- player: Player

+ MainWindow()
+ ~MainWindow()

- on_playBtn_clicked(): void
- on_videoSlider_sliderPressed()
- on_videoSlider_sliderReleased()
- on_videoSlider_sliderMoved(int position)
- on_backwardButton_clicked()
- on_forwardButton_clicked()
- on_debutButton_clicked()
- on_finButton_clicked()
- on_event_filter()   //Chosir un objet à suivre
- on_confirmeButton_clicked()   //Commentaire

slots:
- chooseVideo(): void
- displayImage(): void
- updatePlayerUI(QImage): void
- chooseSavePath(): void
- showInformationObjet(): void

InformationDialog

- blueLable: QLabel
- greenLable: QLabel
- redLable: QLabel
- blueMinLable: QLabel
- blueMaxLable: QLabel
- greenMinLable: QLabel
- greenMaxLable: QLabel
- redMinLable: QLabel
- redMaxLable: QLabel
- player: Player

+ InformationDialog(Player &player)
+ ~InformationDialog()
+ showHistogramme(): void

QDialog

DeplacementMaxDialog

- deplacementText: QTextBox
- confirmeBtn: QPushButton
- deplaceMax: int
- player: Player

+ DeplacementMaxDialog(Player &player)
+ ~DeplacementMaxDialog()
- on_confirmeBtn_clicked(): void
+ setDeplaceMax(int deplacemax): void
+ getDeplaceMax(): int

Trajectoire

+ center_list: vector<Point>

+ Trajectoire()
+ ~Trajectoire()
+ DrawTrajectoire(Mat &): void
+ //supprimer points quand on revient en arrière
+ addPoint(Point &): void

AlgoGeneral

- informationObject: InformationObject
- trajectoire: Trajectoire

+ Decter(Mat & currentFrame): void
+ informationObject(): InformationObject&
+ trajectoire(): Trajectoire&

InformationObject

- contours: vector<vector<Point>>
- center: Point2f
- radius: float
- current_object: Mat

+ InformationObject()
+ ~InformationObject()
+ setContours(vector<vector<Point>>): void
+ setCenter(Point2f): void
+ setRadius(float): void
+ setCurrentObject(Mat): void
+ getContours(): vector<vector<Point>>
+ getCenter(): Point2f
+ getRadius(): float
+ getCurrentObject(): Mat
+ DrawContours(Mat &): void

AlgoSoustraction

- start_frame: Mat
- deplacementMax: int

+ Algorithme(int deplacementmax)
+ ~Algorithme()
+ setStartFrame(Mat): void
+ setDeplacementMax(int): void
+ GenerateBinaryImage(): void

Use

Extends

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Extends