

```

FCaptureRequest
+ FVector PosWS
+ FVector NormalWS
+ int32 SidePx
+ uint32 WarmupFrames
+ FGuid RequestId
+ FGuid SensorId
+ FString SensorName
+ FDateTime TimestampUTC
+ float SkyViewFactor
+ FCaptureRequest()
+ FCaptureRequest(const
    FVector &InPosWS, const
    FVector &InNormalWS, int32
    InSidePx, uint32 InWarmupFrames,
    FGuid InSensorId, const FString
    &InSensorName, FDateTime InTimestampUTC
    =FDateTime(0), FGuid InRequestId=FGuid())
+ FORCEINLINE bool IsValid()
() const
+ FORCEINLINE FCaptureRequest
    WithSidePx(int32 InSidePx) const
+ FORCEINLINE FCaptureRequest
    WithWarmup(uint32 InWarmup) const
+ FORCEINLINE FCaptureRequest
    WithTimestamp(FDateTime
    InUTC) const
+ FORCEINLINE FCaptureRequest
    WithSensorId(FGuid InId) const
+ bool operator==(const
    FCaptureRequest &Other)
    const
+ bool operator!=(const
    FCaptureRequest &Other)
    const
+ FString ToString()
    const
+ static FORCEINLINE
    FCaptureRequest Make
    (const FVector &InPosWS,
    const FVector &InNormalWS,
    int32 InSidePx, uint32 InWarmupFrames,
    FGuid InSensorId, FString InSensorName,
    FDateTime InTimestampUTC=FDateTime(0),
    , FGuid InRequestId=FGuid())

```

+Request

```

FCaptureContext
+ int32 FaceIndex
+ int32 FacesCollected
+ TArray< FQuat > FixedFaceRots
+ TStaticArray< TRefCountPtr
    < IPooledRenderTarget >,
    NumFaces > FaceRTs
+ TRefCountPtr< FRDGPoolable
    Buffer > ExtractedIrradiance
    Buffer
+ TUniquePtr< FRHIGPUBuffer
    Readback > IrradianceReadback
+ bool bReadbackEnqueued
+ static constexpr int32
    NumFaces

```

-Capture

FExportOptions
+ bool bExportCSV
+ bool bExportImages
+ FDirectoryPath OutputDir
+ FString ImagesSubdir
+ FString CSVFilename

-ExportOptions

UWorldSubsystem

FTickableGameObject

```

UIrradianceSubsystem
- ECaptureState State
- TSharedPtr< class FIRRADIANCE
    ViewExtension, ESPMode::ThreadSafe
    > ViewExt
- std::atomic< bool >
    blRADIANCEValueReady
- std::atomic< float
    > LastIRRADIANCEMean
- std::atomic< float
    > LastIRRADIANCEr
- std::atomic< float
    > LastIRRADIANCEg
- std::atomic< float
    > LastIRRADIANCEb
- bool bForcedRes
- TWkPtr< class SWINDOW
    > PrevPIEWWindow
- FIntPoint PrevViewportSize
and 6 more...
+ virtual void Initialize
    (FSubsystemCollectionBase
    &Collection) override
+ virtual void Deinitialize
    () override
+ virtual bool ShouldCreate
    Subsystem(UObject *Outer)
    const override
+ virtual void Tick(float
    DeltaTime) override
+ virtual TStatId GetStatId
    () const override
+ virtual ETICKABLETICKTYPE
    GetTickableTickType()
    const override
+ virtual UWorld * GetTickable
    GameObjectWorld() const
    override
+ void StartSixFaceCapture
    (const FCaptureRequest &Req)
+ void ConfigureExport
    (bool bCSV, bool bExportImages,
    const FString &OutputDirPath)
+ bool ConsumeLatestIrradiance
    (float &OutValue, float MinSunAltitude=0.f)
and 6 more...
- void TickCapturing()
- void TickReadback()
- void EnqueueReadbackCopy()
- void EnqueueReadbackPolling()
- void EnsureCaptureCamera()
- void StartFaceCapture
    (const FVector &PosWS,
    const FQuat &RotWS)
- void ComputeFinalIrradiance()
- bool ComputeSunOcclusion
    (const FCaptureRequest
    &Req, bool &bOutSunOccluded,
    float &OutHitDistanceM) const
- float ComputeSunVisibility
    (const FCaptureRequest &Req,
    int32 NumSamples) const

```