

Project: IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs)

Submission Title: [Requirements of VLC use cases]

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Re: [To develop VLC usecase]

Abstract: [This document presents requirements of VLC use cases]

Purpose: [For discussion on the protocol requirements for VLC use cases]

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Requirements of VLC use cases

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VLC use cases

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- Broadcasting use case
- Machine-to-machine use case

Requirement of LED illumination use case

- Description
 - Sharing the lighting for illumination and wireless communication
- PHY/MAC Requirement
 - MUST do not darkening
 - MUST do not change the color
- Additional Function Requirement
 - None

Requirement of Vehicle use case

- Description
 - Providing information for safer and more convenient driving
- PHY/MAC Requirement
 - Mobile tracking
 - Visible Light Channel management
- Additional Function Requirement
 - Media data processing, Actuation

Requirement of LBS use case

- Description
 - Providing information for location based service
- PHY/MAC Requirement
 - Lighting FOV(Field of View)
 - Fault identification management
- Additional Function Requirement
 - Defining Location ID, Map

Requirement of Optical ID use case

- Description
 - Providing Optical Identification for an identification service
- PHY/MAC Requirement
 - ID lighting information hiding on space
 - Error detection and recovery
- Additional Function Requirement
 - Defining optical ID

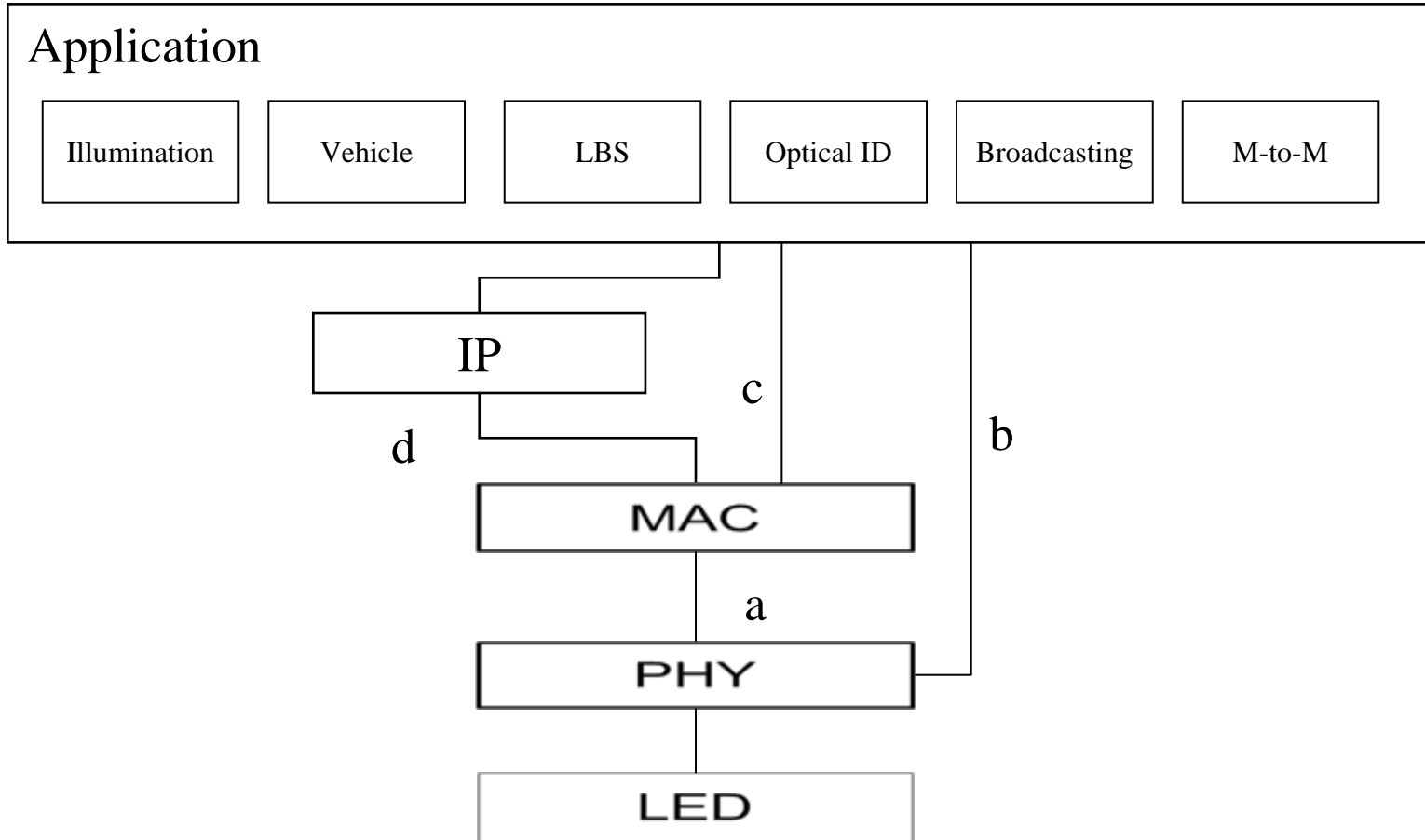
Requirement of Broadcasting use case

- Description
 - Providing information for broadcasting in near field area
- PHY/MAC Requirement
 - Restless transmission
 - Broadcasting Channel management
- Additional Function Requirement
 - Media data processing
 - Connection to station

Requirement of Machine-to-machine use case

- Description
 - exchange information between two machines
- PHY/MAC Requirement
 - FOV Tracking
 - Streaming control
- Additional Function Requirement
 - None

VLC MAC Protocol Stack Relations



Which is ... ?

- The best use case
- The first deployment use case
- Any other much better use case