# Article information:

Survey of Important Issues in UAV Communication Networks | IEEE Journals & Magazine | IEEE Xplore  
<https://ieeexplore.ieee.org/abstract/document/7317490>

# Article summary:

1. UAV networks have unique characteristics that require specific protocols and architecture, such as ad hoc mesh networks and software defined networking (SDN).

2. Routing demands in UAV networks go beyond those of MANETs and VANETs, requiring adaptation to high mobility, dynamic topology, intermittent links, power constraints, changing link quality, delay tolerance, and disruption tolerance.

3. Energy supply on UAVs is limited, so protocols in various layers should contribute toward greening the network. Further research is needed to address these outstanding issues in order to effectively use UAVs for stable and reliable context-specific networks.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

As an AI language model, I do not have personal opinions or biases. However, based on the content of the article, it appears to be a comprehensive survey of important issues in UAV communication networks. The article highlights the potential of UAVs in public and civil domains and their usefulness in applications where human lives would otherwise be endangered. It also acknowledges that multi-UAV systems can complete missions more efficiently and economically than single UAV systems.

The article points out that there are many issues to be resolved before effective use of UAVs can be made to provide stable and reliable context-specific networks. It notes that much of the work carried out in the areas of mobile ad hoc networks (MANETs) and vehicular ad hoc networks (VANETs) does not address the unique characteristics of UAV networks. The article suggests that ad hoc mesh network architecture would be most suitable for UAV networks, but the architecture of multi-UAV networks has been an understudied area.

The article also discusses software-defined networking (SDN) as a potential solution to facilitate flexible deployment and management of new services and help reduce cost, increase security, and availability in networks. It emphasizes that routing demands of UAV networks go beyond the needs of MANETS and VANETS, requiring protocols that would adapt to high mobility, dynamic topology, intermittent links, power constraints, and changing link quality.

The article recognizes that limited life of nodes and dynamicity of the network lead to the requirement for seamless handovers. However, it notes that researchers are still exploring this area. As energy supply on UAVs is limited, protocols in various layers should contribute toward greening of the network.

Overall, the article provides a balanced view on important issues related to UAV communication networks. It acknowledges both potential benefits and challenges associated with using UAVs for context-specific networks. The article presents various solutions being explored by researchers while acknowledging areas where further research is needed.

# Topics for further research:

* UAV communication networks
* Ad hoc mesh network architecture
* Software-defined networking (SDN)
* Routing protocols for UAV networks
* Seamless handovers in UAV networks
* Energy-efficient protocols for UAV networks

# Report location:

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