# Article information:

A low-latency NoC router with lookahead bypass | IEEE Conference Publication | IEEE Xplore  
<https://ieeexplore.ieee.org/abstract/document/5537665>

# Article summary:

1. This article proposes a low-latency NoC router with lookahead bypass to reduce latency and energy consumption.

2. The proposed router architecture makes use of dynamic lookahead bypass to speed up allocation computations and increase the input buffers' bypassing rate.

3. Analysis and simulation results show that the proposed architecture can significantly improve packet latency by up to 32.1% over a state-of-art router design, while costing only a small silicon area overhead.

# 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:

The article is generally reliable and trustworthy, as it provides evidence for its claims in the form of analysis and simulation results which demonstrate the effectiveness of the proposed router architecture in reducing latency and energy consumption. The article also provides an overview of related work in on-chip networks, which helps to contextualize the research presented in this paper. However, there are some potential biases present in the article which should be noted. For example, the authors do not explore any counterarguments or alternative solutions to their proposed approach, nor do they discuss any potential risks associated with their approach. Additionally, there is no discussion of possible limitations or drawbacks of their approach, which could lead readers to believe that their solution is perfect without considering other factors such as cost or scalability. Furthermore, there is no mention of any ethical considerations associated with this research, such as privacy or security concerns that may arise from using this technology in real-world applications. In conclusion, while this article is generally reliable and trustworthy, it would benefit from further exploration into potential biases and counterarguments as well as ethical considerations associated with its use in real-world applications.

# Topics for further research:

* On-chip network counterarguments
* Alternative solutions to on-chip networks
* Risks associated with on-chip networks
* Limitations of on-chip networks
* Cost of on-chip networks
* Ethical considerations of on-chip networks

# Report location:

<https://www.fullpicture.app/item/92bf9f426d77aff54ad2b7766a4f36eb>