|  |  |
| --- | --- |
| Editor's Comments

|  |
| --- |
| [**REJECT**](https://peerj.com/submissions/9134/)  |

 |
| Both reviewers recommended Rejection. The paper's writing needs improvement to make the design and contribution of FLIP more clear. The paper should also include a more substantial evaluation section to support the author's arguments.  |
|  |
| Reviewer 1 (Anonymous)  |
| Basic reporting  |
| This paper advocates using flat labels in future internet architectures and presents an Internet protocol, namely FLIP, on top of this idea. The author presents several design choices of the protocol.In the article, the author reviews two school of thoughts on general purpose architectures, the ones that optimize towards certain popular workloads (CCN, CONET) and the ones that do not privilege in any way (flat labels). However, in fact, CCN is also a general purpose network architecture. In addition, the author claims that CCN requires huge hardware resources for caching, which is not necessarily the case. CCN routers do not require large caches, and can operate with cache sizes that are comparable to the ones of packet buffers in IP routers. Nevertheless, larger cache size could be more helpful for content distribution, and many of those can be stored on low-cost disks.The author also discusses Generalized Virtual Network (GVN), however, it is not clear what the contribution is from the author on GVN. It seems that enabling fragmentation support is the major contribution. However, fragmentation is a common issue for many protocols and have been addressed before. The novelty of the work on fragmentation support is limited.Regarding the discussion on flat labels, the author claims that the advantage is that these labels of variable and finite length can be converted into fixed-length labels. However, in order to guarantee these labels to be unique, the length of the label can be very long. It is not clear whether eventually there will be sufficient benefits from this design choice. It is interesting that the author incorporates crypto-currency support in the protocol design, but it is not clear whether this is a function that would be used commonly in networks, which is a key point that the author advocates for flat labels.Last but not least, the writing style can be greatly improved, it was not straightforward to understand the main contribution of this submission. Below are several typos in the article.L56: CNN --> CCNL237: flat lables based --> flat label-basedL598: warrying --> worrying  |
| Experimental design  |
| Because the submitted article is most about presenting the design decisions, there is not much experimental design. The paper could be much stronger if there are discussions on the overhead of the long fixed-length flat labels, and also whether it is indeed feasible to build a global-wide Dynamo/Cassandra system for data storage.  |
| Validity of the findings  |
| Similar as the comments on experimental design, there is no quantitative analysis to justify the design decisions in the paper. Many of the design decisions are based on only intuitions.Of course, implementing a future internet architecture is hard in practice, but some prototype system development would make the paper much stronger and convincible.  |
| Comments for the Author  |
| Overall, it seems that the author is quite interesting in networking architecture in general, and has introduced a couple of interesting ideas, such as embedding crypto-currency in the network protocol. However, many of these ideas and not justified or validated via (preliminary) experiments, which makes the paper weak.In addition, the writing can be greatly improved.  |
|  |
| Reviewer 2 (Anonymous)  |
| Basic reporting  |
| This paper lacks clarity. The English is poor. It is hard to see what problems the paper tries to solve, how it derives it solutions, and how it validates its solution, etc.The paper basically needs to be completely rewritten to be readable.  |
| Experimental design  |
| This paper argues FLIP is better than CCN, CONET, ROFL, Internames, etc. But how? The paper talks on and on on various disconnected points, while you seem to never can really know what FLIP is.The paper does not include any experiments.The paper needs to introduce a clear logic to present its work: What is the problem to address? What is the solution? How is the solution evaluated? etc.  |
| Validity of the findings  |
| No data reported in this work.  |
| Comments for the Author  |
| This paper lacks clarity. The work might have novelty but it is hard to see.  |
|  |