

Flow-Aware Networking is a promising concept for future Internet. It is a simple, scalable solution which conforms to the net neutrality paradigm. In this book, we presented detailed descriptions of FAN alongside new algorithms and mechanisms which may improve transmission in this environment.

The new architecture proposal, AFAN, simplifies the scheduling process and is less complex than PFQ or PDRR. Congestions may be eliminated by implementing one of the congestion control mechanisms proposed in this book. Moreover, transmission performance may be improved using TCP NewJersey, MFAN, or a new routing algorithm proposed for FAN.

FAN ensures fairness among flows accepted in the routers. However, the per-user fairness looks to be a more desirable solution, especially in networks where some users generate more flows than others. There are several proposals to solve the problem of failures in FAN. The GPFL or multi-layer strategy with the EHOT algorithm ensures stable transmission of streaming flows without breaks, even if they need to be redirected.

The implementation of the XP router in the Click environment allowed us to show that the Flow-Aware Networking architecture does work and can be implemented in real networks.

We hope that the solutions and concepts presented in this book will be helpful and stimulating for a wide range of readers.