

# The Protocol Construction for ATM Network

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## 【Abstract】

The purpose of this paper is to study about resource reservations under the broadband networks. When network bandwidth gets more considerable, the applications about real-time service are getting more popular and important. The best-effort service can't support real-time services well, so several new service classes have defined. We hope that users can reserve the network resource and preserve the resource for a period of time required. Of course, we would not like to waste the network bandwidth. In this paper, we use a dynamic ATM network model as our simulation model. In the simulation model, a LAN environments is considered to illustrate the reservation cell loss rate. Three kinds of scenarios are assumed as our retry reservation cell scheme in the simulation. We expect to reduce the reservation cell failure rate by proposed methods. The simulation results show that a better performance can be achieved.

**Keywords:** resource reservation, real-time services, network bandwidth.

## 【摘要】

本篇論文的主要目的是在探討關於在 ATM 網路上的資源保留協定，當網路頻寬逐漸變得相當大，即時服務型態的應用也變得非常重要且普遍。本文中提出一個動態的 ATM 網路模型，我們利用三種基本的方法來提高資源預定的成功率，另外二種改善型的方法也被加入研究中，我們希望此一動態 ATM 網路模型能適合於各種不同的交通型態的 ATM 網路。在此篇論文中使用的動態 ATM 網路模型，於模擬中使用區域網路(LAN)，其資源預定失敗率也都被加以評估。模擬的結果顯示了我們的改善方案確具成效。

**關鍵字：**資源保留，即時服務，網路頻寬