

**99,997**

**99,998**

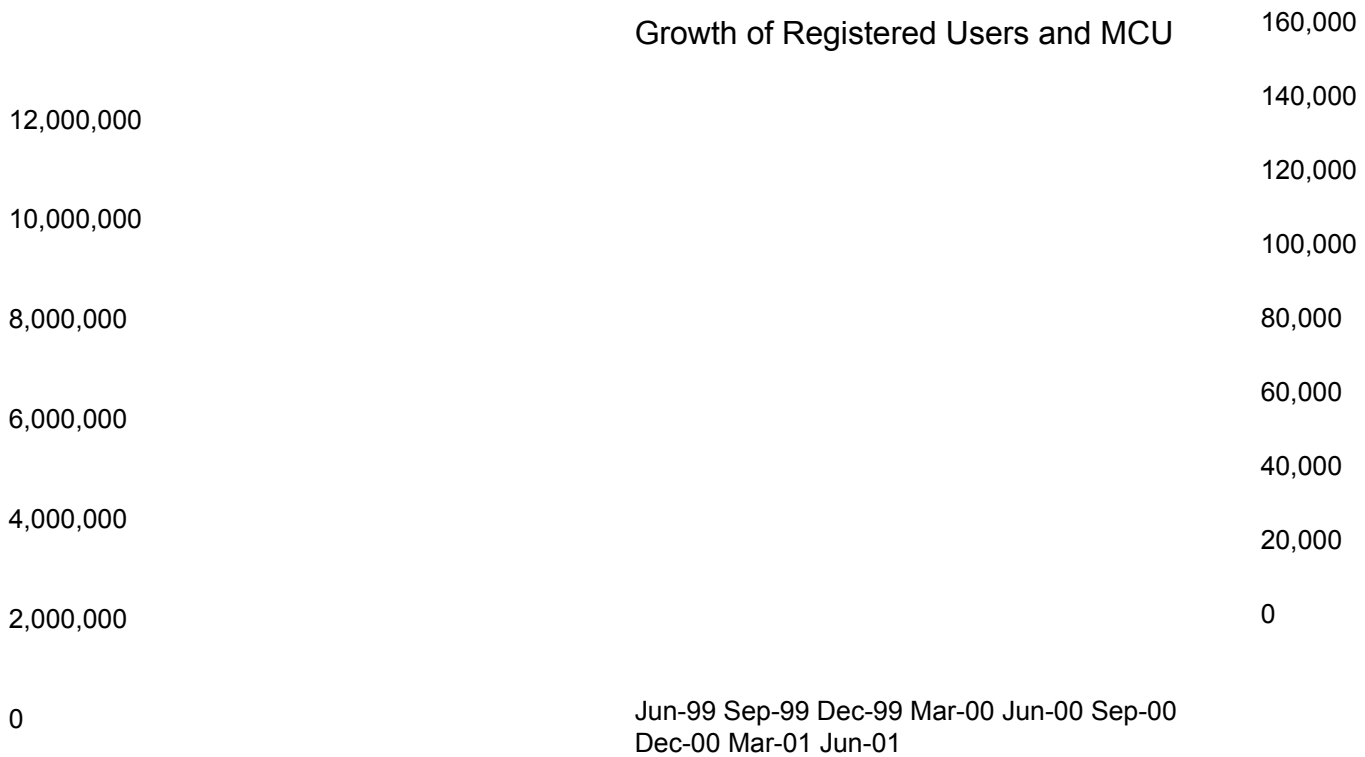
**99,999**

**...**

**100,000**

**Concurrent users**

### Growth of Registered Users and MCU



Registered Users Maximum Concurrent Users

**Operation Cost >> Revenue**

**Find a new revenue source or Terminate it**

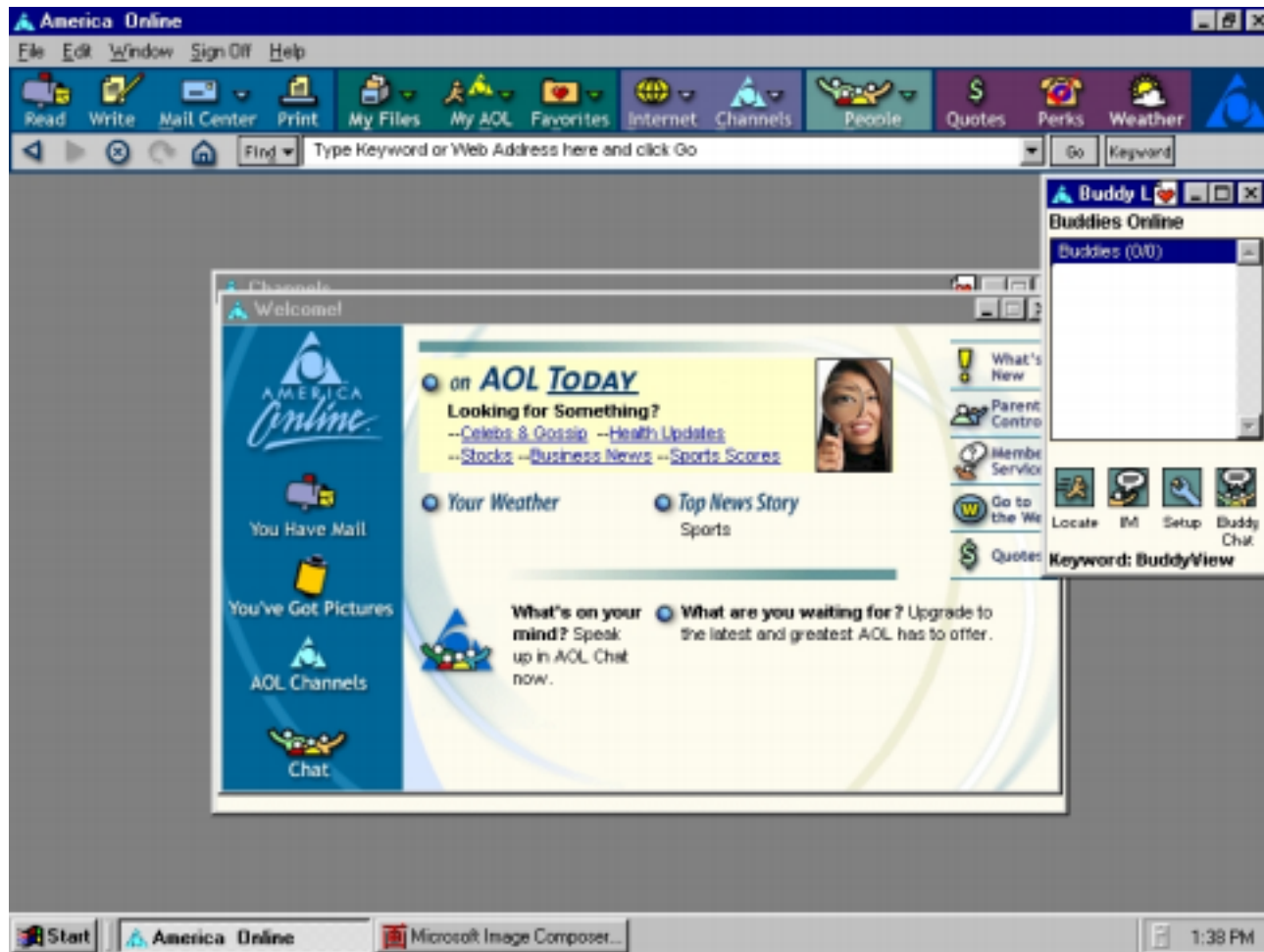
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## **History of SayClub.com**

(1999-2004, an anonymous real-time community)



**Marvin Park**  
**Former Director of SayClub**



# America Online



# Hitel

hitel  
CHATTING

대화실 [분류]

케이티하이텔

<p><b>병방람이 좋아</b></p> <ol style="list-style-type: none"> <li>1. 느긋있는 대화</li> <li>2. 자유로운 대화</li> <li>3. 초보자 대화실</li> <li>4. 타자방</li> <li>5. 함께 만드는 대화실</li> </ol>	<p><b>지역별 대화실</b></p> <ol style="list-style-type: none"> <li>21. 서울특별시</li> <li>22. 인천/경기/강원</li> <li>23. 대전/충청</li> <li>24. 광주/전라</li> <li>25. 대구/울산/경상</li> <li>26. 부산/제주</li> </ol>	<p><b>우리끼리 좋아</b></p> <ol style="list-style-type: none"> <li>41. 초등학생 끼리끼리</li> <li>42. 중학생 모여라</li> <li>43. 고등학생 대화실</li> <li>44. 대학생 대화실</li> <li>45. 직장인의 휴식처</li> <li>46. 게임 좋아하는 사람</li> </ol>
<p><b>특화 대화실</b></p> <ol style="list-style-type: none"> <li>11. 여성 대화실</li> <li>12. 주부 대화실</li> <li>13. 연령별 대화실</li> <li>14. 영어 대화실</li> <li>15. 장애인 대화실</li> <li>16. KETEL 대화실</li> </ol>	<p><b>MULTI - CHAT</b></p> <ol style="list-style-type: none"> <li>31. 인터넷 대화실</li> <li>32. 스포츠서울 스타채팅</li> </ol> <p>77. 미팅/랜팔 100. 러브♥글♥럽 새로운 만남이 있는 곳...</p>	<p><b>데모 / 안내</b></p> <ol style="list-style-type: none"> <li>51. 실종당구, 나!</li> <li>52. 체인지 업! 12자 ID</li> <li>53. 대화실 데모관</li> </ol> <hr/> <ol style="list-style-type: none"> <li>88. 신고센터</li> <li>99. 대화실 이용안내</li> </ol>

이동 (GO, 인덱스) 상위메뉴 (P) 초기화면 (T) 다음메뉴 (N) 앞메뉴 (A) 프로필 (PF)  
기타 (ETC) 도움말 (H) >>

<1990년대를 풍미했던 PC통신 '하이텔'의 대화방>



Unitel





**Daum Cafe**

# **Real-time Interaction on the Web?**

## ❖ System Architecture for Connection-Oriented Web

File Edit View Help  http://www.sayclub.com/

interactive web contents

JavaScript

**620 Servers**

**(400M PVs/day)**

(User Agent)

**Web Servers**

**IRC-Robot**



Invitation  
or  
Memo  
Persistent Connection

**Session**  
(Hidden Applet)



**IRC Daemons (Chat Servers)**

.....

**Distributed System**  
(200 servers for 200,000 MCU)

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❖ **Sharing User Created Contents (Services) in Real-Time**

**By simply allowing HTML and scripting in chat rooms, users created and played**

- image and video sharing
- personal radio broadcasting
- karaoke room
- text MUD (adventure games)
- role-playing chat
- auction (for game items)



## **Failed Business Models**

- **Subscription Based Online Service**
  - **Extra Charge for Community File Storage**
- **Ad-based Reward System**

**Anonymous + Realtime = People are looking at me.**

**Online Identity Matters**

❖ **Sales of Combinatorial Avatar Decoration Items**









# ❖ Developing a New Payment and Billing System for Teenagers

**Enter Cell Phone**

✓  
Brown Leather Jacket

 Price : 3.50

✓  
Heart Jean 

  Price : 2.00

**Total Price USD**  
5.50

**Payment Method** Cell Phone ▼

**Number**

**Receive an Auth. Code (via SMS)**



**Enter the Auth.  
Code**

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**Transaction Complete  
(Added to Cell Phone Bill)**

❖ **Evolution Cycle of Anonymous Communities**

**Grow**

**Lighter**

**Temporary Strangers** **Continuous Strangers**

**Create**

**Heavier**

□  
**Repeat** Link Link

**Engagement**

**Temporary Buddies** **Continuous Buddies** **threshold area**

**Lighter** **Heavier**



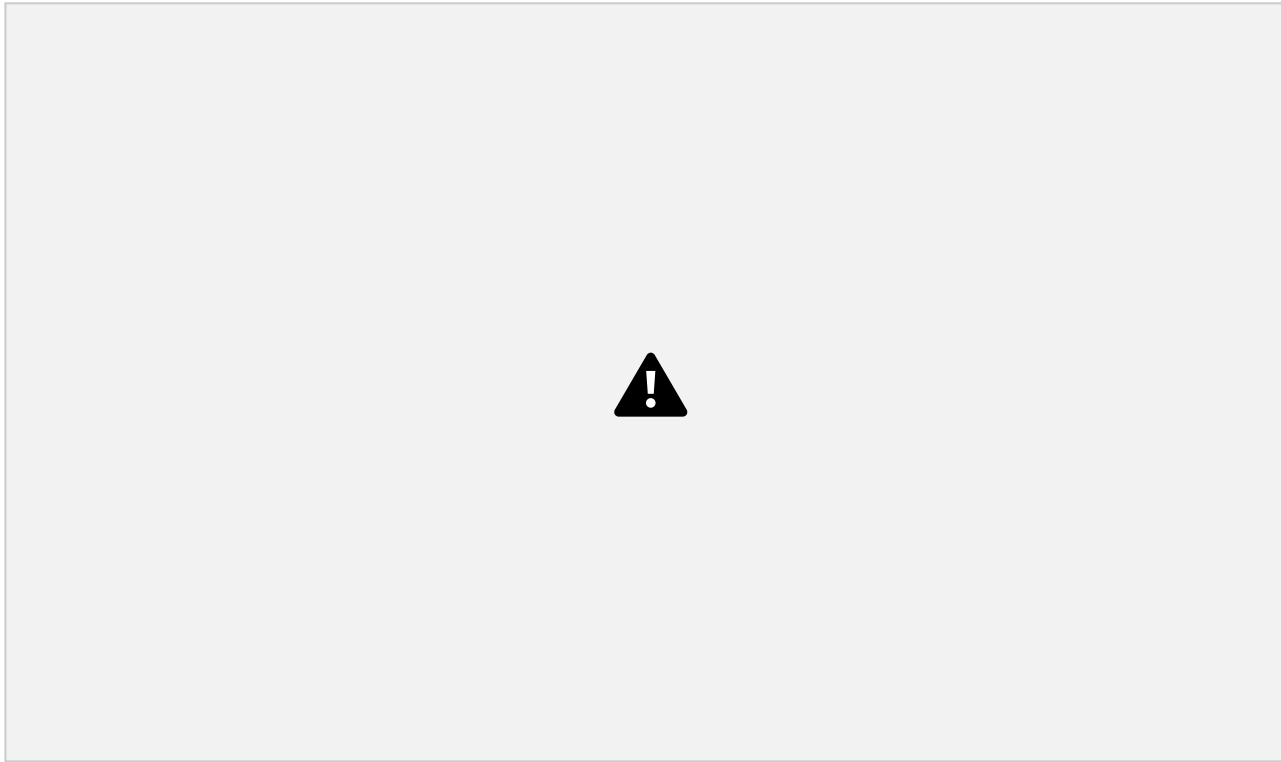
❖  
**How**

**SayClub users are connected with each other**

**sample actors: 300 sample actors: 500**

**Hubs and Followers**

❖ **Number of Buddies & Total Expense**



**Number of Buddies**

- <http://web.archive.org/web/> (May 15, 2016)
- <https://namu.wiki/w/%EC%84%B8%EC%9D%B4%ED%81%B4%EB%9F%BD> (May 15, 2016)
- Hisashi Ohtsuki, Christoph Hauert, Erez Lieberman & Martin A. Nowak, A Simple rule for the evolution of cooperation on graphs and social networks. Nature, Vol. 441 (25 May 2006)
- Han Woo Park, Hyperlink Network Analysis: A New Method for Study of Social Structure on the Web



