

# 141st SMPTE Technical Conference and Exhibition

Marriott Marquis Hotel, New York City  
November 19-22, 1999

## “Sprockets, Samples, and Satellites: Moving Imaging into the Third Millennium”

Next month, all roads lead to the “Big Apple” to attend the 141st Technical Conference and Exhibition, scheduled to be held on November 19-22 at the Marriott Marquis in New York City. Following the theme, “Sprockets, Samples, and Satellites: Moving Imaging into the Third Millennium,” it is anticipated that the 1999 conference will attract as many people as the last technical conference that was held on the east coast two years ago.

The four-day program, chaired by Birney Dayton, NVision, and Linda Young, DuArt Film Laboratories, will include an all-day seminar, which will begin conference activities on Friday, November 19, followed by ten technical paper sessions, to be held over the course of three days.

For those wishing to see the latest technology and equipment the industry has to offer as it embarks into the 21st century, exhibitors from leading companies will be on hand to display their latest products. The program line-up also includes the Welcome Reception, Industry Luncheon, Fellows Luncheon, and Honors and Awards Reception where attendees will have the opportunity to meet, mingle, and network with fellow industry professionals.

### All-Day Seminar Friday, November 19

#### Video 1080 By 1920/24P—A New Standard

**Seminar Chair: Gavin Schutz,  
Four Media Co.**

Making 1080P/24 Succeed in DTV  
Post-Production, *Dave Bancroft,*  
Philips Digital Video Systems

24 Progressive, the Age-Old  
Telecine Processes Hit the Outside  
World, *Peter Swinson,* Cintel  
International

Neutrality—Can an HD  
Switcher/DVE Sit on all “Sides” of  
the Television Standards Fence?  
*Tracy Hopkins,* Snell & Wilcox

Multiple Image Formats and Multiple Frame Rate  
Television Production Systems, *Dave Wiswell,* Panasonic  
Broadcast & Digital Systems Co.

Is There Such a Thing as a Universal Format Converter for  
DTV? *Peter Wilson,* Snell & Wilcox

Managing the Content Explosion with 24P Universal  
Editing + Mastering, *Michael Phillips,* Avid Technology  
Inc.

Technical Aspects of the New World of Multi-Format DTV  
Embodying Progressive, Interlaced, and Segmented Frame  
Video Formats, *Laurence J. Thorpe,* Sony Electronics, Inc.

Hybrid Mastering, *Patrick Byrne,* Discreet Logic

### Welcome Reception

### Technical Paper Presentations Saturday Morning, November 20

#### Digital Post-Production

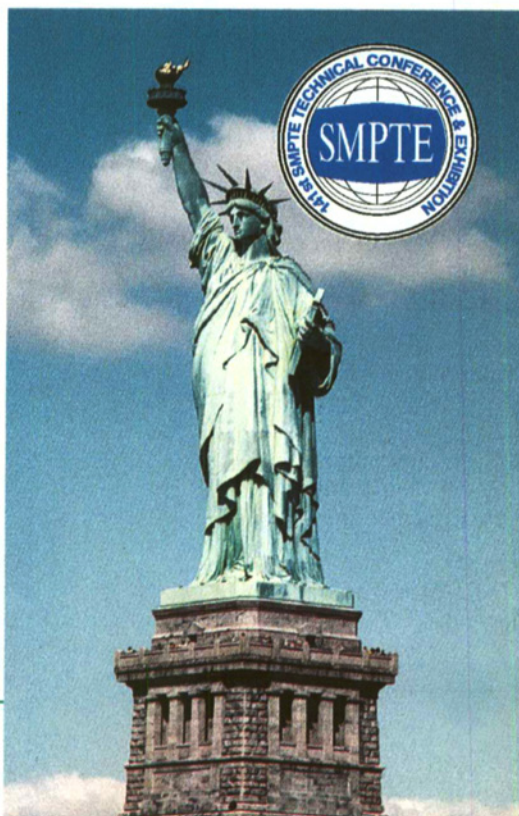
**Session Chair: John Galt,  
Panavision**

High-Definition Stripping,  
Genlock, and Timing Regeneration  
of Multiple Formats of High-  
Definition Video and Film, *Michael  
Poinboeuf,* SGI

Quality in HDTV Post, *Mark  
Horton and Bob Pank,* Quantel,  
Ltd.

Loop Bandwidth Optimization and  
Jitter Measurement Techniques for  
Serial HDTV Systems, *Atul  
Krishna Gupta, Aapool Biman,* and  
*Dino Toffolon,* Gennum Corp.

HD/DTV and the Closed  
Captioning Food Chain, *David  
Strachan and Romolo Margarelli,*  
Evertz Microsystems Ltd.



If You're no Longer Using Your Father's Video Editor, Why are You Still Using His Router? *Dimitri Chernyshov*, Mercury Computer Systems, Inc.

Measurement Technology for Film Visual Effects, *Alan Lasky*, Panavision



## Displays for the Theater and Home

**Session Co-Chairs: H. Loren Nielsen and Matthew Cowan, Entertainment Technology Consultants**

### Non-Broadcast Digital Video

**Session Chair: Jay Adrick, Harris Corp.**

Ultrahigh-Sensitivity Color HDTV Camera for Shooting Heavenly Bodies, *K. Majima, S. Sunazaki, J. Yamazaki, and T. Ando*, Japan Broadcasting Corp. (NHK)

Video Over the Internet Transport Appliances, *Shawn Carahan*, Telestream, Inc.

Controlling Color in a Digital World, *Daniel B. Reid*, Renaissance Photographic Imaging

Strategic Implications and Applications of Advanced Motion Imaging Systems for the Department of Defense, *Steve Long*, Video Technology for the National Imagery and Mapping Agency, U.S. Department of Defense

NASA's Myriad Uses of Digital Video, *Rodney Grubbs, NASA, Walt Lindblom and Sandy George*, Computer Sciences Corp.

Data Broadcasting Meets the Internet, *Dov Rubin*, NDS Americas

### Industry Luncheon

## Saturday Afternoon, November 20

### Electronic Media Storage

**Session Chair: Al Kovalick, Hewlett-Packard**

Building Centralized Broadcast Facilities in a Networked World, *Brad Gilmer*, Gilmer & Associates

Implementation of SMPTE Metadata for Advanced Authoring Applications, *Oliver Morgan and Tim Bingham*, Avid Technology, Inc.

Strategic Implications for Future Content Management Systems, *John D. Litke*, ABC, Inc.

Media Asset Management: Strategies for the 21st Century, *Philip Page*, Informix Software, Inc.

Transitioning to File-Based Electronic Media Storage, *John F. Hennessy*, Ampex Data Systems Corp.

Networked Storage Architecture: Coupling Guaranteed Time with Guaranteed Bit Delivery of Media on a Fault-Resilient Storage Platform, *John Pittas*, SeaChange International

High Availability Architectures for Media Storage and Access, *Camden Ford*, Omneon Video Networks

Centralized Security for the Multimedia Home Network, *Eli Hibshoosh*, NDS

Cinema Projection Distortion, *Stuart W. Singer and Ronald A. Petrozzo*, Schneider Optics, Inc.

Post-Production and Display Considerations for the Digital Cinema Release of Star Wars Episode 1—The Phantom Menace, *Dave Schuuelle*, Lucasfilm, Ltd.

A Comparison of Alternative HD Display Technologies to CRT, *Peter F. van Kessel*, Texas Instruments, Inc.

Utilization Issues for Large, Consumer Video Displays, *Jeffrey B. Sampsell*, Sharp Laboratories of America

An Alternative Architecture for High-Performance Display Systems, *R. W. Corrigan and B. R. Lang*, Silicon Light Machines

## Sunday Morning, November 21

### Networking for Production

**Session Chair: Hugo P. Gaggioni, Sony Electronics, Inc.**

Networking—Requirements for Production and Post-Production Applications, *Edward Hobson*, Omneon Video Networks

Global Contribution Video Networks: Criteria and Implementation, *Steven L. Storozum*, Video Products Group

A Pragmatic Approach to Networking in Production, *Steve Owen*, Quantel Ltd.

Tutorial on SDTI-CP, *James Wilkinson*, Sony BPE

Integrated Wide-Area ATM Solutions for Broadcasters and Production, *Anthony Magliocco*, Video and Broadband Products Group and *Sam Kershaw*, ECI Telecom

Real-Time Remote File System for Program Production, *Atsuhiko Tsuji, Shinzo Doi, Yukiko Itoh, and Tsutomu Tanaka*, Matsushita Electric Industrial Co., Ltd.

MPEG-2 Video Archive System for Live-Broadcasting



Using IP Over ATM and a Study on Video Retrieval System for Large-Scale Archives, *K. Matsubayashi, H. Sakurada, K. Nomura, T. Shimoyama, T. Katou, S. Ogawa, K. Majima, and T. Uehara*, NHK

### Capture and Production of News for DTV

**Session Chair: Karen C. Mills, White Light Video, Broadcasting & Cable**

A DTV Technology Roadmap for ENG Capture and Production, *Jeff Andrew*, Gannett Broadcasting Corp.

Electronic Ingestion and Processing in the Digital Newsroom, *Kevin Ivey*, New Media and *Carlos Montalvo*, Virage

Time Warner's Approach to a Digital News Environment, *Harlan Nuegeboren*, Time Warner Cable; *Ron Jacoby*, SGI; and *Jeff Klitzner*, NLE Systems, Panasonic Broadcast and Digital Systems Co.

Some Early Explorations in DTV Local News Programming, *Patrick J. Holland*, KOMO-TV and *Laurence J. Thorpe*, Sony Electronics, Inc.

Multi-Format Acquisition and Hierarchical Compression in DTV Systems, *J. Michael Brinkman*, Panasonic Broadcast & Digital Systems Co.

On-Air Digital Microwave and STL Challenges and Enabling Technologies for ENG Acquisition, *Scott Nelson*, Alcatel USA

### Fellows Luncheon

#### Sunday Afternoon, November 21

##### Format Conversions

**Session Chair: Jim Kutzner, Comark Digital Services of Thomcast Communications**

Conversion of Film-Based Interlaced HD Material to Progressive: Harmony or Cacophony, *Randall Hoffner*, ABC, Inc.

Smart Digital Video Interfaces Solve the Problem of Multiple Standards, *Greg Sadowski*, Silicon Graphics, Inc.

MPEG-2 Transcoding from the Production Format into the Emission Format, *Rolf Hedtke* and *Matthias Schnoell*, FH-Wiesbaden, University of Applied Sciences



Motion Compensated De-Interlacing: The Key to the Digital Video Transition, *Jed Deame*, TeraNex, Inc.

A Picture Format Converter Using Motion Compensated De-Interlacing, *Kenji Sueiyama*, Victor Company of Japan

### Audio Post-Production for DTV

**Session Chair: Steve Davis, Crawford Audio Services/Crawford Communications**

Impact of 5.1 Audio in Television Production and Distribution, *Jim DeFilippis*, Fox DTV Lab.

Channel Television Production, *Jim Hilson*, Dolby Labs

Multi-Channel Audio Management in the Digital Facility, *Nigel Spratling*, NVision

Metadata Authoring and System Integration, *Steve Lyman*, Dolby Labs

A/V Synchronization A to V, *Tim Carrol* and *Craig Todd*, Dolby Labs

Audio-Video Synchronization Across DTV Transport Interfaces: The Impossible Dream? *Randall Hoffner*, ABC, Inc.

### Honors and Awards Reception

#### Monday Morning, November 22

##### Film in the Digital World

**Session Co-Chairs: Timothy Spitzer, The Tape House Editorial Company and Domenic Rom, DuArt Film and Video**

Distributed Production Using Loosely and Tightly Coupled Systems, *Christopher C. Woollard*, University of Greenwich

The Latest Emulsion Technology on New Super F-Series, *K. Makino, R. Nishimura, Y. Mimaki, S. Yamaryo, and H. Murakami*, Fuji Photo Film Co., Ltd.

DVD Dailies: Creative Collaboration for Feature Film Makers, *Richard Mizer*, Digital Ventures Diversified and *Kim Aubrey*, American Zoetrope

Digital Film Scanning and Recording, *Steven Eisner*, Cinesite, Inc.

A New Concept in Advanced Film Scanning, *Dave Corbitt*, Innovation TK

Title TBD, *Chuck Spaulding*, Cintel, Inc.

Title TBD, *Dave Bancroft*, Philips Digital Video Systems

Chemical Processing of Digital Soundtracks—Future Challenges for Laboratories, *Ujwal Nirgudkar*, Filmcenter



## DTV Distribution and Delivery Session Chair: *Edmund A. Williams,* Public Broadcasting Service



The Use of One MPEG Profile for Production, Contribution, and Distribution Networking, *Louis Cheveau* and *Anthony Caruso*, CBC

Video Performance Measurements in DTV Transmission Systems, *Edward Reuss*, Tiernan Communications, Inc.

Migration to Digital Satellite Delivery via Transponder Band-Edge Carrier, *Scott Birdwell*, MSNBC Cable

Management and Control of Receivers in a Satellite Distribution Network, *Martin J. Stein*, General Instrument

Monitoring and Control for Digital Transmission Systems, *Melissa Lowver*, Drake Automation, Inc.

On-Air Digital Microwave Interference Testing, *Jerry Brown*, and *Scott Nelson*, Alcatel USA

Vision or Reality? Breaking the Bandwidth Barrier, *Adityo Prakash*, Pulsent

### Conclusion of Program

### SMPTE Exhibition

The Exhibition, which is a main conference attraction, will cover approximately 30,000 sq. ft. of floor space. It will be open on Saturday and Sunday November 20 and 21 from 10 a.m. to 6 p.m. and Monday, November 22, from 10 a.m. to 2 p.m.

The following companies will be participating:

Ace Video  
Adaptive Broadband Corp.  
ADC Telecommunications  
Alcatel  
Anton/Bauer, Inc.  
Astro Systems, Inc.  
Audio Accessories  
Avid Technologies, Inc.  
Axon Digital Design B.V.  
Barco, Inc.  
Belden Wire & Cable Co.  
Bi-Tronics, Inc.  
Bittree  
Broadcast Microwave Services  
The Broadcast Store  
Chyron Corp.  
CommScope, Inc.  
Communications Specialities, Inc.  
Data Check, Div. of Lavi Systems  
Dolby Laboratories, Inc.  
DVS Digital Video, Inc.

Evertz Microsystems Ltd.  
Faroudja Laboratories  
Force Incorporated  
Fore Systems  
Forefront Graphics  
Gepeco International, Inc.  
Grass Valley Group

Intelvideo Inc.

Kings Electronics Co., Inc.  
Leader Instruments  
Leitch, Inc.  
Maxell Corp. of America  
Miranda Technologies, Inc.  
Mohawk/CDT  
NDS Americas, Inc.  
Nemal Electronics  
Network Electronics AS  
NVision  
Odetics Broadcast  
Omnivue  
Panasonic Broadcast & Digital Systems Co.  
Pesa Switching Systems  
Philips  
Quantel, Inc.  
Quartz Electronics Ltd.  
RMC Sales  
Rohde & Schwarz, Inc.  
Ross Video Limited  
Sierra Video Systems  
Snell & Wilcox  
Sony Electronics, Inc.  
Standard Communication Corp.  
Synthesys Research, Inc.  
Tandberg Television  
Tektronix, Inc.  
Telecast Fiber Systems, Inc.  
Telestream, Inc.  
Television Equipment Associates, Inc.  
TeraNex  
Thomson Broadcast, Inc.  
Tiernan Communications, Inc.  
Trompeter Electronics  
Vidcad Documentation Programs  
Video Products Group  
Videotek, Inc.  
Wavetek Wandel Goltermann  
Wohler Technologies  
Xyratex

For additional information, contact Ilisha Stier at SMPTE Headquarters. Her e-mail address is [istier@smpte.org](mailto:istier@smpte.org).

## Sponsorships

Opportunities for sponsorships are still available for the Partners Breakfast, Coffee Breaks, All-Day Seminar, Welcome Reception, Conference Final Program, Industry Reception, and Luncheon.

The following companies will be participating:

- NBC
- Thomson Broadcast Systems
- Plus 8 Video
- Eastman Kodak Co.
- ABC Inc.

Contact Ilisha Stier, at Headquarters, for additional information.

## Air Travel Discounts

### United Airlines

SMPTE is pleased to announce that it has been able to secure a special discount agreement with United Airlines unavailable to the general public. A 5% discount off the lowest applicable fare will be offered only when you or your travel agent call United's toll-free number 1-800-521-4041 and refer to the Meeting ID Number 558HN. A 10% discount off the unrestricted mid-week coach fares is available when purchased 7 days in advance. An additional 5% discount will apply when tickets are purchased at least 60 days in advance of the travel date. Discounts apply only on United, Shuttle by United, and United Express. Dedicated reservationists are on duty 7 days a week, 7:00 a.m. to 12:00 midnight EST. Book early to take advantage of promotional fares that give you the greatest discount. Mileage Plus members receive full credit for all miles flown to this meeting.



### Travel Strategies and American Airlines

Travel Strategies and American Airlines are offering savings on airfares to LaGuardia, JFK, Newark, Islip, White Plains, and Stewart Airports from anywhere in the United States and Canada for all attendees of the SMPTE Conference in New York City.

Participants will receive special zone fares plus a bonus discount if purchased 60 days or more prior to departure, as well as additional savings of 5% to 10% off applicable Coach and First Class fares. Frequent flyer miles will accrue.

Call Travel Strategies at 1-800-862-8747 or American Airlines at 1-800-433-1790 and refer to file #30N9US. Reservations can also be made through the Travel Strategies website at [www.travelstrategies.com](http://www.travelstrategies.com). If booking through the website please add SMPTE as the company name to ensure your discount.

## Registration Cancellation & Refunds

Should you require a refund of the registration fee prior to the Conference, SMPTE's policy is as follows:

- All cancellations must be made in writing to SMPTE Headquarters.
- A \$50 administration fee will be incurred on all transactions.
- No refunds or cancellations will be accepted if postmarked after November 1, 1999. Substitutions are allowed and encouraged.

## Additional Information

The *Journal* will publish additional information, as it becomes available. You can also check the SMPTE website at [www.smpte.org](http://www.smpte.org).

## Registration Now Available Online





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## conference registration form

### REGISTRATION PACKAGES

#### Full Conference

Includes admission to two half day seminars on Friday, November 19, all of the technical sessions, admission to the exhibit hall, the Welcome Reception, the Industry Luncheon, and the Honors and Awards Reception.

#### Seminar Only

Includes admission to all-day seminar on Friday, November 19, and a box lunch.

#### Sessions Only

Includes admission to all of the technical sessions, the exhibit hall, the Welcome Reception, the Industry Luncheon, and the Honors and Awards Reception.

#### Life Member / Life Fellow

Includes admission to two half day seminars on Friday, November 19, the technical sessions and the exhibit hall. Additional tickets are required for admission to the Welcome Reception, Industry Luncheon, Honors and Awards Reception and the Fellows Luncheon.

#### Students

Includes admission to two half day seminars on Friday, November 19, all of the technical sessions, admission to the exhibit hall, the Welcome Reception, the Industry Luncheon, and the Honors and Awards Reception.

#### Speakers

Includes two half day seminars on Friday, November 19, all of the technical sessions, admission to the exhibit hall, the Welcome Reception, the Industry Luncheon, and the Honors and Awards Reception.

Please use one form per person. Registration Credentials will be available for pick-up on site.

No registrations will be accepted at headquarters after Friday, November 5th. All registrations after that date MUST be purchased on site.

### PAYMENT INFORMATION

Check  MC  VISA  AMEX

Card Number \_\_\_\_\_

Expiration Date \_\_\_\_\_

Name on card \_\_\_\_\_

Signature \_\_\_\_\_

Send Registration Info and Payment to

**SMPTE REGISTRATION**  
595 West Hartsdale Road  
White Plains, NY 10607  
Fax 914.761.3115

For more information contact

ILISHA L. STIER  
914.761.1100 x.114  
Please visit our website  
www.smpte.org

### FOR OFFICIAL USE ONLY

Membership approval \_\_\_\_\_

Batch Number \_\_\_\_\_

Approval Date \_\_\_\_\_

Payment \_\_\_\_\_

### REGISTRATION SELECTION [Please check appropriate box] on or before 10/9/99 after 10/9/99

Full Conference	Member	\$500	<input type="checkbox"/>	\$600	<input type="checkbox"/>
Full Conference	Nonmember	\$700	<input type="checkbox"/>	\$800	<input type="checkbox"/>
Seminar only	Member	\$250	<input type="checkbox"/>	\$350	<input type="checkbox"/>
Seminar only	Nonmember	\$450	<input type="checkbox"/>	\$550	<input type="checkbox"/>
Sessions only	Member	\$300	<input type="checkbox"/>	\$400	<input type="checkbox"/>
Sessions only	Nonmember	\$400	<input type="checkbox"/>	\$500	<input type="checkbox"/>
Life Member / Life Fellow		\$50	<input type="checkbox"/>	\$50	<input type="checkbox"/>
Student	Member	\$50	<input type="checkbox"/>	\$50	<input type="checkbox"/>
Student	Nonmember	\$75	<input type="checkbox"/>	\$75	<input type="checkbox"/>
Speakers		\$350	<input type="checkbox"/>	\$350	<input type="checkbox"/>

Additional Tickets [only needed for additional people]

Industry Luncheon	\$50	<input type="checkbox"/>	\$50	<input type="checkbox"/>
Welcome Reception	\$75	<input type="checkbox"/>	\$75	<input type="checkbox"/>
Fellows Luncheon <small>Fellows/Life Fellows Only</small>	\$50	<input type="checkbox"/>	\$50	<input type="checkbox"/>
Honors and Awards Reception	\$75	<input type="checkbox"/>	\$75	<input type="checkbox"/>
Exhibits Only	\$25	<input type="checkbox"/>	\$25	<input type="checkbox"/>

#### Attention Nonmembers!

Avoid paying \$200 more than members by joining SMPTE now for \$95 annually, and receive the SMPTE Journal monthly. Check the "New Membership" option below and add member rate.

New Membership (an application will be mailed to you) \$95  \$95

Date of Birth \_\_\_\_\_

Job Title \_\_\_\_\_

Company Description \_\_\_\_\_

New Student Membership \$25  \$25

Name of School \_\_\_\_\_

Date of Graduation \_\_\_\_\_

Name of Faculty Advisor \_\_\_\_\_

Renewal (a renewal form will be mailed to you) [Student] \$25  \$95

Check here if info above is new

Total Amount Due U.S. Dollars \$  \$

NO REGISTRATIONS WILL BE ACCEPTED AT HEADQUARTERS AFTER FRIDAY, NOVEMBER 5TH.

ALL REGISTRATIONS AFTER THAT DATE MUST BE PURCHASED ON SITE

Check here if you have a disability and may require special accommodations

Name \_\_\_\_\_  
of registrant

Name \_\_\_\_\_  
as you want it to appear on badge

Name \_\_\_\_\_  
of person completing this form if not the registrant

Company \_\_\_\_\_

Address \_\_\_\_\_  Office  Home

City \_\_\_\_\_ State \_\_\_\_\_

Country \_\_\_\_\_ Zip Code \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_

E-Mail \_\_\_\_\_

SMPTE Member? YES  NO

Membership # \_\_\_\_\_



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The 141st SMPTE Technical Conference & Exhibition

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## hotel reservation form

To make your hotel reservation for the 141st SMPTE Technical Conference and Exhibition, you must return this completed form to the Marriott Marquis via mail at 1535 Broadway, New York, New York 10036 or fax (212) 704-8934, or you may call the hotel directly at 1-800-843-4898. If you are calling the hotel directly, please make sure that you mention SMPTE to assure that you receive the SMPTE special rate.

All Reservations will be accepted on a first come, first serve basis and must be made by Friday, October 22nd.

### PLEASE PRINT OR TYPE

Name \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

Country \_\_\_\_\_ Zip/Postal Code \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_

### ROOM TYPES / RATES Please check your desired room type

Single \$190.00     Double \$205.00     Triple \$222.00     Quad \$232.00

Smoking     Non Smoking

Arrival Date: \_\_\_\_\_ Departure Date: \_\_\_\_\_

Special Accommodations Requests: The hotel will try to meet all requests, but there is no guarantee.

\_\_\_\_\_  
\_\_\_\_\_

### PAYMENT INFORMATION Please check payment type

- CHECK [Payable to Marriott Marquis]
- MC
- VISA
- AMEX
- DISCOVER
- CART BLANC
- DINERS CLUB

Card Number \_\_\_\_\_

Expiration Date \_\_\_\_\_

Name on card \_\_\_\_\_

Signature \_\_\_\_\_



**ALL RESERVATIONS MUST BE RECEIVED BY FRIDAY, OCTOBER 22ND 1999**