

# SCHEDULING MEETINGS WITH GUESTS' APPROVAL

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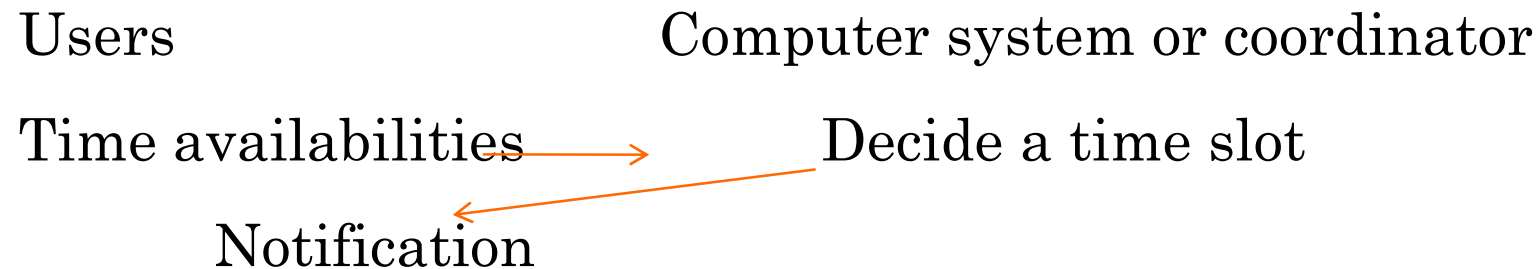
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# OBJECTIVE

- Mosier & Tammaro (1997): meeting scheduling success case.
- In general, meeting scheduling tools are not successful.
- Why?
- Perhaps the explanation is a complex combination of several factors.
- Our objective: present a hypothesis for one of these factors and a way to solve it.



# MEETING TIME COORDINATION



Grudin's explanation (1989): Who benefits with meeting scheduling tools? CSCW vs. Information Systems.

Time availability? No trivial issue: example

"I am invited to attend a meeting next Monday at 2:00 PM. Will I attend?"

Well, it depends...



## PREVIOUS APPROACHES

- Synchronous system (Greif & Sarin, 1987)
- Optimization problem (Sugihara et al., 1989)
- Calendars as virtual overhead transparencies (Beard et al., 1990)
- Agents negotiating scheduling options (Sen & Durfee, 1991)
- Learning Personal Assistants (Mitchell et al., 1994)
- Voting (Ephrati et al., 1994)



# PERSONALIZING PREFERENCES

Ephrati et al. (1994) propose two meeting scheduling scenarios:  
Open Systems  
Closed Systems

Difficult to accept them as realistic.

Our proposal:

Latitude model:

- employees must attend most of the meetings
- they may decline some invitations
- variety of reasons to prefer, defer or anticipate meetings, places, have them one next to the other,...
- preferences may change over time
- people prefer not to disclose some of these reasons.

People should schedule meetings themselves!



# IMPLICATIONS

- Example: for some people, “next Thursday at 10 AM” is good time slot. For one person, it is not

Voting Strategy

Negotiating strategy

- Distributed and asynchronous
- Proposed approach is simpler than previous attempts
- It is also more complex, incorporating people's preferences: a time slot is not simply available or not. It may be, depending on a conjunction of factors



# CONFLICT RESOLUTION AND NEGOTIATION

- Negotiation should be short: propose schedules likely to be accepted, with known preferences.
- Privacy vs. awareness.
- One solution: let people tell other people whatever they feel adequate.
- Incentive: meeting schedules will be most satisfying to users providing as much information as possible.
- Social environment must be positive.



# DESIGNING A SYSTEM TO IMPLEMENT THE LATITUDE MODEL

- Any user with access to a local network can be invited to a meeting.
- Menu-based, graphical interface. Privacy must be ensured. Facilities to express various degrees of agreement.
- Negotiation in three stages:
  - a) Coordinator working with preferences
  - b) Request sent to each invitee, specifying details
  - c) If all invited persons accept  $\longrightarrow$  confirmation  
otherwise  $\longrightarrow$  cancelation





# GRACE: EXAMPLE IMPLEMENTATION

- It runs on a network of Sun Sparc workstation with Sun Os/Xwindows.



# GRACE

**Personal day planner**

Schedule ▾ Mail Box Preferences Users Exit

**12**  
Monday  
May  
1997

Hugo

09:00

09:30

10:00

10:30 Project report

11:00

11:30

12:00 Annual Budget (A24 room)

12:30

13:00

13:30 Prototype review

14:00

14:30

15:00

Calendar

Month: ▾ May Year: 1997 ▴ ▾


◀ Today ▶

M	Tu	W	Th	F	Sa	Su
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

Hugo

Monday 12, May 1997. 12:58:03

# GRACE



Meeting Invitation

Scheduled By:

When:

Subject :

Location :

Priority :


My Choice is:

Accept

Decline

Decide Later

See Detail



# GRACE

**Week Planner**

**Weekly Meeting Preferences**

	Mon	Tue	Wed	Thu	Fri
09:00					
09:30	Yes			Yes	
10:00					
10:30					No, When...
11:00					
11:30		Yes			
12:00			No	No	No
12:30	Yes				
13:00					
13:30					
14:00				Yes	
14:30					
15:00			Yes		
15:30	Yes		Yes		
16:00			Yes		
16:30		No, When...	Yes		
17:00			Yes		
17:30					
18:00					
18:30					
19:00					
19:30					
20:00					
20:30					

**Preferences Legend**

- Indifferent
- Yes
- Yes, When...
- No
- No, When...

Other Preferences

OK

**Rule Detail**

Apply Rule On Mondays, between 9:30 and 10:00. ?

Status: ☐ Yes, when...

When: ☐ Proponent IS

Otherwise

Rule Preview

I prefer to go to meetings when proponent is Luis

Otherwise, I don't prefer.

OK X

José A. Pino, 2010



# GRACE

Meeting Time

Date : Monday 26, May 1997
Time : 15:30
Duration : 00:30
Aut> Seek

Conflicts at 15:30

☒ Myself
☒ Luis
☒ Francisco

Hugo  
Accepts this Meeting Profile!

Planner Detail

Day's Planner

09:00	
09:30	
10:00	
10:30	
11:00	
11:30	
12:00	
12:30	
13:00	
13:30	
14:00	
14:30	
15:00	
15:30	
16:00	
16:30	
17:00	
17:30	
18:00	
18:30	
19:00	
19:30	
20:00	
20:30	

Group's Day Planner

	Myself	Luis	Francis
09:00			
09:30			
10:00			
10:30			
11:00			
11:30			
12:00			
12:30			
13:00			
13:30			
14:00			
14:30			
15:00			
15:30			
16:00			
16:30			
17:00			
17:30			
18:00			
18:30			
19:00			
19:30			
20:00			
20:30			

# CONCLUSIONS

- Latitude model is an alternative to the Open or Closed strategies.
- Usefulness depends on the trust people have the information they provide will be well used.
- Reduced number of messages needed to schedule a meeting when compared with a conventional tool.
- Differences in details users provide
- Privacy features may puzzle new users trying to schedule a meeting.
- Limited number of preference choices offered to the users.
- GRACE is robustly running, but there are no tests with real users yet.

