



JAN 17-19

MASKLESS
MEETING

Day Two

SAN JOSE

Meeting Groundrules

What will be discussed

- Maskless Technology
- Technology needs, not solutions
- Activity lists will be prioritized
- Task/activities, timelines, resources, feedback on the reality of the work plan

Meeting Groundrules

What will not be discussed

- Program management
- Potential supplies
- Potential funding
- Confidential plans/technology
- Detailed specifications

Session Logistics

- **Brainstorming Activities**

- Introduction/level set by session chairs (5 minutes)
- Brainstorming/analyzing needs (20 minutes)
- Developing list of issues (30 minutes)
- Prioritizing (10 minutes)

- **Main Session**

- Reporting results (10 minutes per session)
- Prioritizing

Working Session Logistics

- **Brainstorming**

- Attendees are randomly assigned to a major task brainstorming group by a color coded dot on his/her badge
- Chairs will have a brainstorming facilitator for each group
- The group will select an recorder
- All activities/issues generated by the group will be kept for later reference

Working Session Logistics

- **Developing list of issues**
 - Each session should develop a prioritize list of issues
 - Each session should appoint a presenter
 - Clarifying points should be noted
 - File should be transferred to memory stick for transfer to conference computer

Brainstorming/ Analysis Procedure

- **Brainstorming**

- Go for quantity, not quality – work quickly
- Out of the box thinking is encouraged
- Expand on other's ideas
- No discussion, no evaluation
- Record all ideas
- Clarify meaning and terms after ideas are generated

- **Analyzing**

- Consolidate by major natural concepts
- Test for reasonableness of groupings

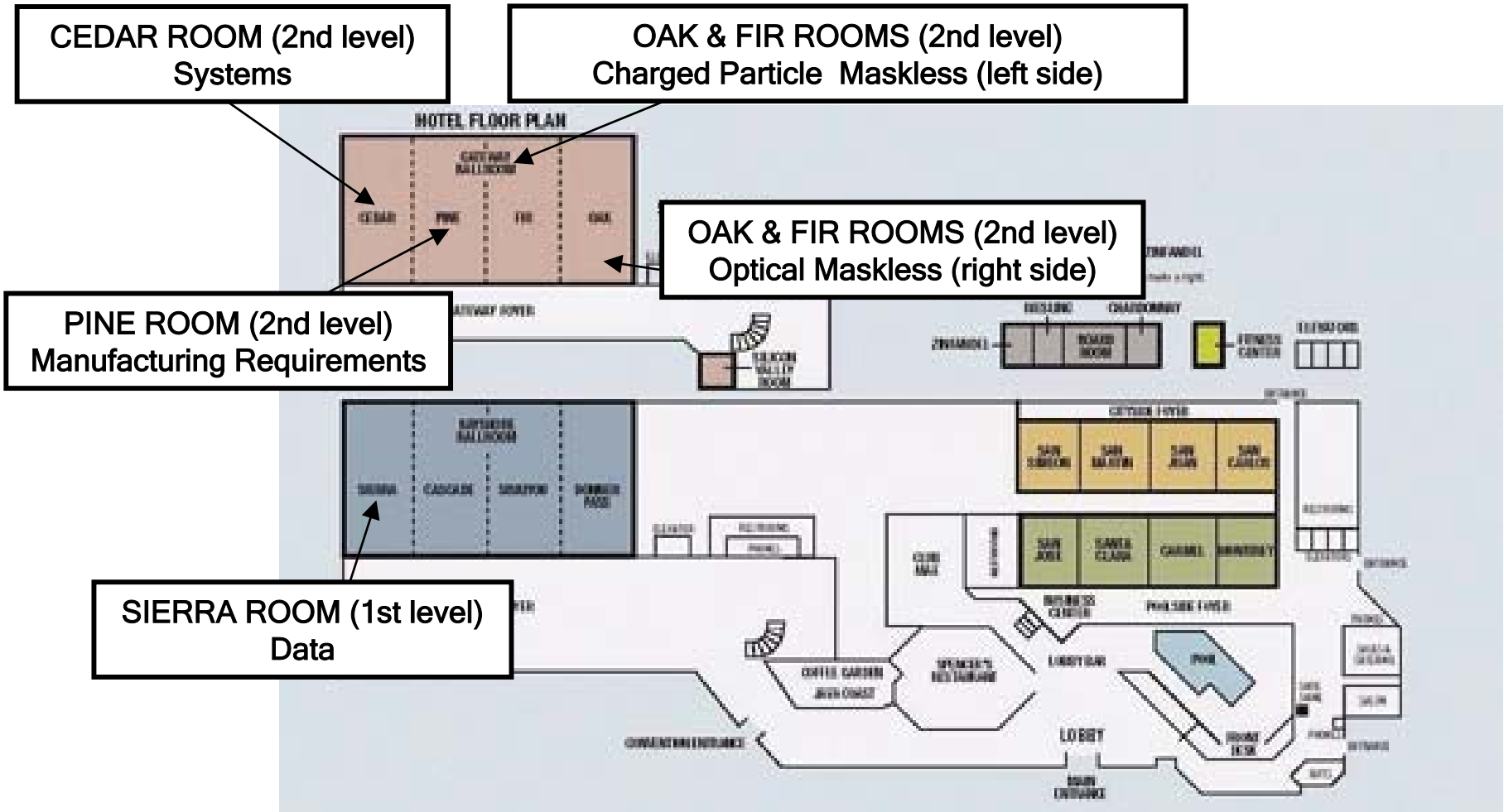
Brainstorming/ Analysis Procedure

- Group brainstorming on detailed needs and issues. 5 minutes allocated to develop ideas and write on sticky paper. Round robin input format, with comments at the end to clarify meaning and terms. Number each unique idea (Total of 20 minutes for activities)
- Facilitator collects ideas and categorizes them on flip chart, develop issues (30 minutes for this and next activity)
- Group can added comments and clarifications to issues identified on flip chart.
- Group prioritizes issues for presentation to assembly (10 minutes)

Breakout Sessions

- **Optical Maskless - green (Oak/Fir, right)**
- **Charged Particle Maskless - red (Oak/Fir, left)**
- **System - blue (Cedar)**
- **Data - orange (Sierra)**
- **Manufacturing Requirements - yellow(Pine)**

Breakout Session Locations



Optical Maskless

- **including specific technology issues, e.g.,**
 - physical limitations of throughput,
 - Fabrication techniques of arrayed components
 - blanker,
 - sources,
 - lenses,
 - deflectors

Charged Particle Maskless

- **including specific technology issues, e.g.,**
 - physical limits on throughput,
 - fabrication techniques,
 - manufacturing tolerances,
 - specific issues of throughput
 - potential and key limitations
 - total beam current,
 - Coulomb interaction,
 - wafer heating

System

- **Writing strategy**

- scanning techniques,
- redundancy,
- proximity correction,
- gray levels,
- design grid resolution,
- pattern registration/overlay,

- **Architecture**

- number of beams and scanning strategy,
- scalability to higher throughput,
- electron source and modulation approach

Data

- **Data transmission and management**
 - data rates,
 - compression techniques,
 - transmission techniques,
 - sender/receiver components,
 - shift register organization etc

Manufacturing Requirements

- Infrastructure readiness,
- Timing requirements,
- Schedule reality,
- Throughput requirements,
- Economic impact,
- Economic advantages
- Template writer