TITLE: Creating Electronic Craft Experiences for Children

PRESENTERS:
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Diane Willow (Professor, University of Minnesota),
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OBJECTIVES AND TOPICS COVERED
This workshop will focus on how create experiences for children electronic
materials and fabrication tools in the context of craft activities. The workshop will
have both hands-on and discussion on components.

During the hands-on time, we will work with both simple materials that are easy
to find as well as more robust technologies that we are developing or using
including:
• LEDs (Light Emitting Diodes), basic sensors, switches.
• Lasercutters and lasercut materials
• Machine controlled sewing machines and conductive thread
• A craft electronics kit with materials that create sound, light, and
  movement
• Craft materials such as fabric, wire, feathers, etc.

The presenters will bring materials from workshops they have run including
examples of children’s creations, examples of materials used, photographs of
workshops, and hand-outs. These materials will be from a variety of types of
workshops including ones on kinetic sculpture, electronic jewelry, and creatures
that communicate with each other. Participants will be encouraged to bring any
materials, documentation, and ideas that they themselves are inspired by.

In the discussion, the presenters will describe their experiences running
electronic craft workshops with kids and participants will discuss their experience
in the current workshop. We will cover important issues that come up with using
electronics in a craft context such as:
• materials we’ve used, why we like them and how to obtain them,
• creating age and time appropriate activities,
• considering the physical space,
• how to introduce ideas along with materials, and
• how to avoid having the technology overwhelm the experience

The intention is that the workshop will encourage the participants to think about
how they could bring ideas about electronic crafts back to their work.

RELEVANCE TO IDC 2005
There is a growing interest in creating experiences with electronic and
mechanical components in the context of aesthetic design activities. Many
members of the IDC community are involved in these activities and many others
may be interested in them. Now is a wonderful time for us to get together to discuss this burgeoning area.

In addition,

- These design activities provide a platform for rich, interdisciplinary learning about ideas and design, materials and mechanics, and electronics and electricity.
- Working with physical technological materials in the context of craft or design may appeal to different children and afford working with different ideas including ones that are more aesthetically or experientially-inspired.
- By providing children with opportunities to design, we allow them to experience the designer’s world where materials meet ideas, learn what may interest them about that world, and help them become more aware of how things were designed and how they might design them.

**SCHEDULE**

30 minutes  
Orientation. Introducing ourselves. Discussing what we hope to gain.

1:45 hours  
Break into groups. Participants work with materials together. Organizers assist and offer their workshop experiences in this hands-on environment.

45 minutes  
Participants present their creations and findings. Discussion of what we’ve learned and what we plan to do next.