



1999 National Meeting Workshop

Advanced Wireless Communications: Are We Ready?

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DoubleTree Hotel
San Jose, CA

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What's Next?



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Assume 3G Will Happen!

Future communications systems:

- ✓ ***allow communications any time/any where/by any one***
- ✓ ***highly mobile***
- ✓ ***long battery life***
- ✓ ***sold in large quantities***
- ✓ ***broader bandwidth***
- ✓ ***higher data rate***
- ✓ ***higher frequencies***
- ✓ ***combo of mobile, satellite and fiber links***

What's Needed for 4G and Beyond?



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ATP and the Wireless Industry

- Invitation to open dialogue; industry advice/
ideas
 - ✓ where does industry need to go?
 - ✓ when does it need to arrive?
 - ✓ why does it need ATP?
 - ✓ why should the nation care?

Preparing for Tomorrow Today



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ATP and Advanced Wireless Communications

- Promote product-driven, industrial integration
- Catalyze vertical and horizontal partnerships between American supplier and user companies
- Tackle high technical risk R&D that cuts across both technological and business boundaries
- Fund companies that comprise tomorrow's food chain

Stimulate joint venture and single applicant proposals that meet these goals



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Industry Leadership is Essential!

- ✓ Use every opportunity to discuss, plan, and distill your ideas
- ✓ When doubt or questions arise, call EPTO
- ✓ Send us your pre-proposals for evaluation and feedback
- ✓ Begin your proposal planning NOW!



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The Difference ATP Makes

- Higher risk
- Leap-frog technology
- Multiple applications
- Expanded company & national competencies
- Broad diffusion

ATP



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What ATP Can Do for You

- Early financial support
 - ✓ Reduced risk for R&D investment
- Research support
 - ✓ Information on assembling a JV
 - ✓ Links to additional technical resources
- Recognition
 - ✓ Leverage for additional financing
 - ✓ External validation
- Independence
 - ✓ Companies retain their intellectual property rights

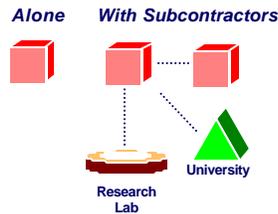


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ATP Eligibility

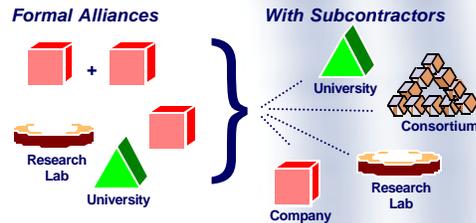
SINGLE COMPANIES



- For-profit company
- 3-year time limit
- \$2M award cap
- Company pays indirect costs
- Large companies cost share >60% of project cost

- Intellectual property is owned by the for-profit companies
- ATP encourages teaming arrangements - most projects involve alliances

JOINT VENTURES



- At least 2 for-profit companies
- 5-year time limit
- No limit on award amount
- Industry share >50% total cost



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U.S.-Incorporated Foreign-Owned Companies Rules for Participation ...

- As with all projects, must produce U.S. economic benefits
 - ✓ R&D and manufacturing in the U.S.
 - ✓ Increase U.S. employment
 - ✓ Promote U.S. supplier infrastructure
- Country of origin must provide local investment and grant opportunities to U.S.-owned companies comparable to any other company in that country; and protect intellectual property rights
- PL 102-245 authorizes suspension of award if criteria no longer satisfied



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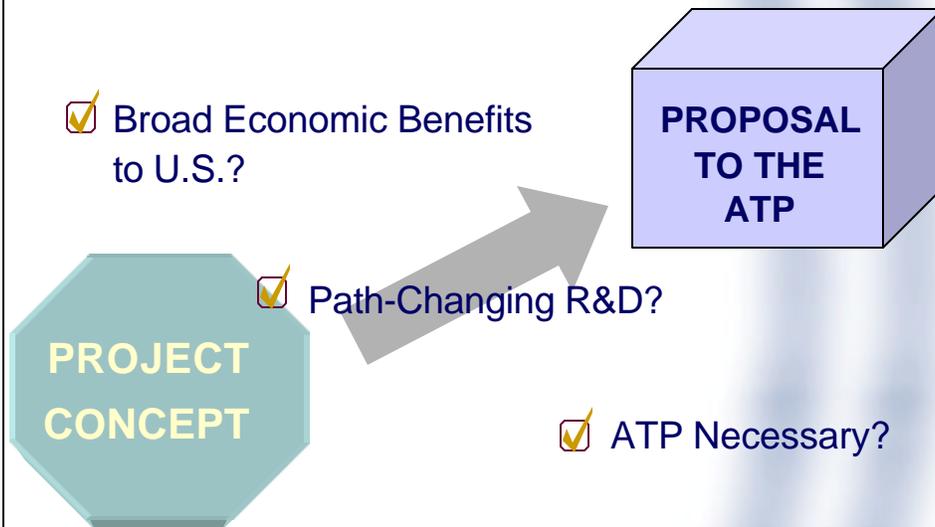


Intellectual Property Provisions

- Companies incorporated in the U.S. keep intellectual property rights
- Universities and nonprofit research organizations may receive share of return from royalties but cannot own title to intellectual property
- Companies can license
- Government reserves the right to royalty-free non-exclusive license for government use
 - ✓ Non-disclosure (trade secrets protected)
 - ✓ Government rights rarely invoked



Is ATP Right for You?





How ATP Can Help Your Company

Why ATP?

- "... will enable U.S. equipment manufacturers to be ahead of foreign competitors..."
- "... will allow needed very high risk R&D to proceed to a stage after which, through reduced risk profiles, industry will be able to fully fund."
- "...allows the formation of a critical collaboration of materials suppliers, process experts, tool manufacturers and end users to address a technological barrier which is beyond the risk profiles of each partner."
- "... provides the means to pursue diverse applications of this technology beyond what ... could be pursued on our own."
- "... too revolutionary with too large uncertainty of success to be supported internally ..."
- "... allows this industry to reach higher, farther, and faster than it could on its own!"



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Getting Started

Proposal Development the ATP Way ...

- Identify an opportunity
- Identify technical barriers to realizing the opportunity
- Relate technical barriers to specific R&D objectives
- Plan research to eliminate barriers
 - ✓ Innovative
 - ✓ Feasible
 - ✓ Coherent
 - ✓ Integrated
- Present details of R&D plan
- Develop commercialization strategy
 - ✓ Target applications
 - ✓ Plan for broader diffusion



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Pre-Proposals

Year-round submission ...

- Written feedback in approximately 2 weeks
- Pre-proposals can be submitted twice
- 4 pages plus cover
- 5 questions on technical and economic merit



EPTO Contact Information

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ATP Contact Information

www.atp.nist.gov

To Get on the ATP Mailing List:

Call toll-free: 800-ATP-FUND
(800-287-3863)

Fax your name and address to: (301) 926-9524

Send an e-mail message to: atp@nist.gov



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Submitting Your Proposal

Send signed original plus 15 copies to:

National Institute of Standards and Technology
Advanced Technology Program
100 Bureau Drive, Stop 4701
Building 101, Room A407
Gaithersburg, MD 20899-4701
(301) 975-2636



- Mark envelope with **competition name and number**



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Bridging the Gap Between the Laboratory and the Marketplace

- **Who we are**

Your partners for meeting the challenge of tomorrow's competitive RF/wireless electronics environment

Your innovative, path-breaking ideas that will impact your company and the Nation's RF/wireless electronics industry

- **What we are funding**

- **Competitions being held**

EPTO managers that foster your development and lead ATP's evaluation of your RF/wireless proposals

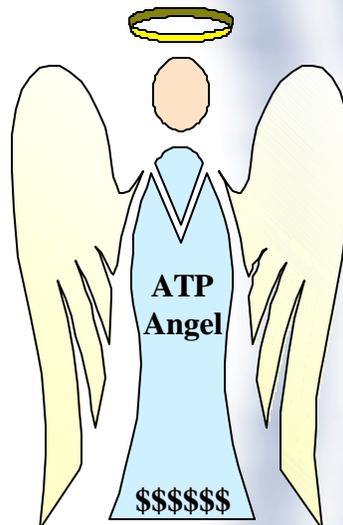


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Identifying and discussing key issues in advanced wireless communications is like predicting the future:

- ✓ *can't be done*
- ✓ *will be foolish*
- ✓ *fools always rush in where angels fear to tread*



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