Sample SR&ED project for the Telecom Industry:

Project Details:

Scientific or Technological Objectives:

Measurement	Current Performance	Objective	Has results?
Eliminate DTMF audible tones (Db)	50	0	Yes
Integrate Standalone Apps (Number of Applications)	2	1	Yes
No Toll Free Password Independent of Cell Carrier (Number of Carriers)	5	1	Yes
Successful Timing of Android App Dialing Sequence (Percent of Successful Calls)	65	100	Yes
Resize Transparent Images (Percent of Picture Quality)	45	100	Yes
Reroute Calls Through (Percent of Calls Rerouted)	0	100	Yes
GPS Enabled Features (Number of Features Using GPS)	0	4	No
Video Compression (kbps)	667	128	No
Increase Applicable Platform Applications (Number of Applicable Platforms)	0	4	No

[CAN WE ADD SOME MORE QUANTIFIABLE OBJECTIVES? I.E COST LIMITATIONS, TIME RESTRICTIONS, PRODUCTION SPEED, MAX AND MIN WEIGHT AND SIZE? REDUCTION OF LABOUR REQUIREMENT TOLERANCE REQUIREMENTS ? ETC]

[CAN WE EXPAND ON THE OLD METHOD AND ITS DIS-ADVANTAGES vs. NEW METHOD AND ITS ADVANTAGES? I.E. SPECIFY PERFORMANCE OF OLD METHOD VS. NEW METHOD

Technology or Knowledge Base Level:

Benchmarking methods & sources for citings:

Benchmark Method/Source	Measurement	Explanatory notes
Internet searches	20 sites / articles	
Patent searches	1 patents	
Competitive products or processes	2 products	
Similar prior in-house technologies	1 products / processes	
Queries to experts	1 responses	

FOR EVERY PROJECT, WE NEED TO SHOW TO THE CRA THAT WE CHECKED THAT THE SOLUTION TO THESE OBJECTIVES WAS NOT READILY AVAILABLE AND THAT WE TOOK REASONABLE STEPS TO ENSURE THAT. WE NEED TO SPECIFY WHERE WE CHECKED FOR THE 'OFF-THE-SHELF' SOLUTION AND THAT NONE WERE AVAILABLE. I.E. ANY INTERNET SEARCHES? ANY PATENT SEARCHES? ANY COMPETITIVE PRODUCTS OR PROCESSES? CONSIDERED ANY POTENTIAL COMPONENTS? ANY QUERIES TO EXPERTS? ETC.]

Field of Science/Technology:

Telecommunication

Scientific or Technological Advancement:

Uncertainty #1: Technical Uncertainities

[WE ARE UNCERTAIN WHAT OPTIMUM SELECTION OF COMPONENTS AND METHODS FOR THEIR INTEGRATION, ... WILL RESULT IN THE OBJECTIVE]

We were uncertain whether or not we could silence the audible tones produced when dialing through the cellphone via the application. There were no immediate built in methods or documentation explaining how to do this.

We were uncertain whether or not if we could merge two separate existing apps into a single application. There was documentation on how to call built-in applications (such as phone, contact book, email, etc) but there was no documentation on how to merge two apps together.

We were uncertain whether or not we could create a uniform solution for all carriers running our app. Some carriers passed an incorrect calling line ID going through the Toll-Free number. Hence when the call hit our system, the user would be prompted for a password. Other carriers passed the calling line ID correctly, hence not needing the password. The split caused issues with the way auto-dialing progressed in our app. There was no immediate documentation on why some carriers send the wrong ID and how to adapt to issues of this nature.

We are uncertain how to stop the user from initiating outgoing calls and send them through our network. There was no documentation on how to programmatically end outgoing calls and reroute them.

[HERE ARE SOME EXAMPLES FOR THE MOST SIGNIFICANT VARIABLES RESEARCHED OR VARIABLES MODIFIED DURING EXPERIMENTATION? I.E. THINGS THAT MIGHT AFFECT PERFORMANCE]

The most significant underlying key variables are:

- Decibel Level,
- Optimal Number of Applications,
- Optimal Number of Carriers,
- Call Rerouting

Activity #1-1: Development and Testing (Fiscal Year 2011)

Methods of experimentation:

[WE NEED TO SHOW THAT WE DID NOT GO STRAIGHT TO THE ANSWER, BUT RATHER THAT WE HAD DIFFICULTIES AND DID NOT KNOW WHAT TO DO. BEST WAY TO SHOW THAT IS BY LISTING ALL THE MODIFICATIONS WE NEEDED TO DO AND HOW MANY TESTS WERE PERFORMED TO RESOLVE OUR ISSUES.

OTHERVISE THE WORK LOOKS ROUTINE (I.E. WE KNEW EXACTLY WHAT TO DO FROM START TO FINISH) AND NOT SR&ED.]

Some potentially eligible activities might include:

- Alternate testing by simulating sound profile on various devices to see how each Device API'S enables controlling audio
- Testing with alternate Decibel level in various Operation system/device platforms to outline how they are different and reassess the existing platform about the limitation and restrictions of them to adopt our system
- Merging the coding from various versions of apps in to one and involving activities to link various applications
- Checking the phone's carrier & adjusting the call path & developing application for proper call line Id & finding out system restrictions
- Testing with telephony control within the codes & related testing to see whether or not the device place calls to the network

Results: *How close did we come to achieving any of the objectives?*

Conclusions: *Can we identify conclusions regarding ANY of the variables cited?*