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MERLIN

An Essential Tool For Long-Range Situation Assessment

CASE STUDIES RELATED TO NATIONAL SECURITY
(DOMESTIC AND INTERNATIONAL)

Prepared For:

Joint Chiefs of Staff
Futures Branch
Joint War Fighting Center
Fort Monroe, Virginia

18 July 1995

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INTRODUCTION

MERLIN -- An Essential Tool For Long-Range Situation Assessment

In an era of ever more restricted military resources the intelligent and effective allocation of those resources becomes increasingly critical. A planning tool which can reliably identify and prioritize potential trouble spots becomes invaluable in that context. Especially if that tool can quantitatively assess situations as to probable onset time, duration and intensity. In the hands of an experienced user, MERLIN Project Timetraks(r) are such a tool.

Resources under severe pressure today include warfighting, logistics and training equipment/manpower, as well as analysis teams, surveillance assets and reconnaissance platforms. It is highly unlikely that any future adversary will be as accommodating as Saddam Hussein was in providing the United States four months to execute a massive force and logistic structure buildup prior to Desert Storm.

Instead it will be necessary for the United States command staff to accurately anticipate just when and where conflicts will escalate from diplomatic maneuvering and posturing to the various stages at which armed forces can engage. This important anticipation becomes extremely difficult in light of the vastly more complex and confused world situation which confronts the United States as compared with the relative simplicity (and stability) of the Cold war standoff with the Soviet Union.

In that prior instance the United States faced a single deadly dragon wielding immense power. Now a dozen or more lethal snakes slither in and

out of the spotlight. None with the firepower of the former USSR, but many with Chemical, Biological, and Nuclear capability which makes their threat significant. The need to effectively respond is unambiguous even if the probable state of the threat at any given future moment is not. The United States resources can be stretched dangerously thin in coping with such a multilateral threat.

As an adjunct to traditional intelligence sources and techniques, MERLIN offers the possibility of serving as a horizon fence early warning system poised to provide an alert well in advance of any otherwise unexpected shifts in the status or stance of adversaries.

By depicting the probable trends of activity (up to a decade or more in advance) regarding countries, situations, key players (politicians, commanders, etc.), and relevant major projects (e.g SDI) analyst teams are provided useful "pointers" towards possible scenarios warranting closer inspection. The timetable which is also provided is an invaluable asset for analysts to work with. It's also a way of establishing whether MERLIN is actually on track. Because the Timetrak(r) should correlate with the timetable of known past events leading up to the current situation as confirmation that its forecasts are likely to be true.

Although the underpinnings of MERLIN rest on a foundation of cyclic behavior which may seem less rock solid than the physics of microelectronics, military research has always been characterized by focussed pragmatism. The essential question is not "How does it work?" but "How well does it work?" What is its empirical utility. In case after case it has nailed the timetable of major world events with shocking accuracy. On the record in annual CNN Larry King Live appearances and in innumerable other venues.

From the outset its primary application was clearly envisioned as being in the geopolitical forecasting realm. Consequently it would be of greatest utility to intelligence analysts and military planners.

It must be strongly emphasized that all of this has been accomplished by an unfunded bootstrap effort by the MERLIN Project Research Group team of Paul Guercio and George Hart. In spite of its reported successes MERLIN is actually still in its Model T phase. With external support this already useful tool could be honed to a much sharper edge, and its performance validated and quantitatively characterized in carefully constructed statistical studies, initially retrospective and eventually prospective.

MERLIN has worked well enough often enough that those familiar with its track record are convinced that the kernel of a revolutionary predictive tool has been created here. The following pages will describe its use and review several case studies of national security and geopolitical relevance. We welcome the opportunity to further discuss its operation and applications at your convenience. The most direct way to reach us is to call George Hart (508) 256-2070 x1234 (ghart@wjasa.com) or Paul Guercio (617)499-7755 (merlin@seacoast.com)

ABOUT MERLIN

MERLIN is a computer-based forecasting technology that combines equations derived from planetary time cycles with past historical data and blends that information into a chronograph(r) or Timetrak(r) that plots the chronology of future events. It was created by Boston-based futurist Paul Guercio and physicist Dr. George Hart excimer laser co-inventor and currently a BMDO contractor performing work related to GPS test target

characterization of the TMD-GBR radar and interceptor laser radar technology development.

MERLIN was initially developed in the summer of 1989. In the fall of the same year, the collapse of the Honicker government in East Germany and subsequent dissolution of the entire Soviet Union, was MERLIN's first and most prescient call to date. The chronographs for the various East European and Balkan satellites (Romania, Albania; various heads of state, etc.) were so unstable and dramatic that we initially thought that if accurate, we were either previewing world war III or the complete collapse of communism. Both seemed equally remote at the time. But clearly a series of unprecedented events was at hand. Then, remarkably, the Berlin wall fell and the Cold war ended. Abruptly, with barely a whimper. MERLIN had spotted and captured what few analysts had dared to suggest. Just like that.

It was this unlikely sequence of mathematically uncommon occurrences that convinced us to press forward with our research. Our experience has been that MERLIN makes the correct call at least 70% of the time over six years in addressing questions where a coin toss often represents the extent of current technology.

ONSET - INTENSITY - DURATION

MERLIN Timetraks(r) provide a picture of three time-sensitive functions: onset, intensity and duration.

Onset means the point of appearance of uncharacteristic activity or heightened eventfulness (within 90 - 180 days of real time). It represents the time coordinates in a chronograph(r) where there is a pronounced restructuring in the character of the trendline or where a clearly defined episode begins.

Intensity means the value of the trendline at a particular time relative to the average level of activity present in the chronograph(r.)

Duration means the extent of a given episode; how long does the trendline demonstrate significant activity. How long will a given episode (or portion of an episode) last.

INTERPRETING MERLIN CHRONOGRAPHS(r)

The MERLIN chronograph(r) or Timetrak(r) is a composite image that is made up of two separate time models. The solid or darker grey portion of the display often is connected with External realities when applied to an individual's life. Factors such as their career or where they live. The shaded or lighter grey portion tends to reflect more Internal concerns related to health or emotional matters. Analogous factors apply to countries, projects or situations, where meaningful reference can, for example, be made to the strength of the fabric of society as opposed to its GDP.

There can also be another dimension to these shading differences. The solid or darker grey portion of the display may identify the level of culminating long-term cyclic activity. It represents factors affecting the situation that have a structural or 'fixed' quality. The kind of conditions we generally think of as fate. The shaded or lighter grey portion

indicates the level of cumulative short-term activity. It represents factors that have a 'fluid' quality. The kind of conditions we associate with consciousness-driven circumstance or 'free will.' Heightened eventfulness most often occurs when both patterns appear simultaneously or when one gives way to the other.

In general, MERLIN isolates "episodic periods," that is, a chain of activity containing a "peak" and surrounded by approaching and departing "foothills." The most dramatic chain and peak usually marks the most significant series of events. A single, very intense but short-lived episode can be indicated by an isolated spike of activity. When this occurs, there is often very little activity indicated in the year preceding or following that episode.

Rapid changes in the character of the trendline are generally more telling than subtle changes. For example, the height of the line is a good indication of probable intensity. This can be substantially reinforced by how dramatically the height is achieved or conversely, how rapidly it decays (within how limited a timeframe does the change occur). Sudden drops or sudden spurts. Key change or transition points are flagged by sudden shifts from one kind of line to another, the sudden (temporary) appearance of a different kind of line which then reverts back to the original, the beginning of a line that then persists or the end of such a line. These and certain other patterns signal separate episodic periods.

The "point of appearance" of change is for many users the most noteworthy factor followed by the duration. The intensity of the change is generally relative to the level of activity displayed within the whole chronograph(r) and provides highly useful information about the scope of change to come.

Change points are always approximate, but generally fall within 90 to 180 days of the actual, real-time events. In its current form, MERLIN performs at a high level of accuracy better than 70% of the time. That may seem like barely a passing grade to some, unless you stop to consider that the alternative (at present) is most often mere guessing.

NOTE: At present, the software alone does not make specific predictions regarding the precise nature of a forthcoming event or episode. It cannot provide a detailed forecast for the actual circumstances to occur. Those forecasts require review by an experienced analyst with a solid working knowledge of the cast of characters and overall context of the situation. Also, a minimum of three MERLIN Timetraks(r) that represent key players or factors in the situation under consideration are generally required for the most precise time-sensitive forecasts. This triangulation permits common points of convergence in the trendlines to be isolated, noted, and interpreted with a high degree of confidence. In such cases, a better than 70% accuracy rate has been demonstrated over a six year period.

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prepared for the JCS/Joint War Fighting Center
by The MERLIN Project(r) Research Group Box C Cambridge, MA. 02140
for release: Tuesday, July 18, 1995

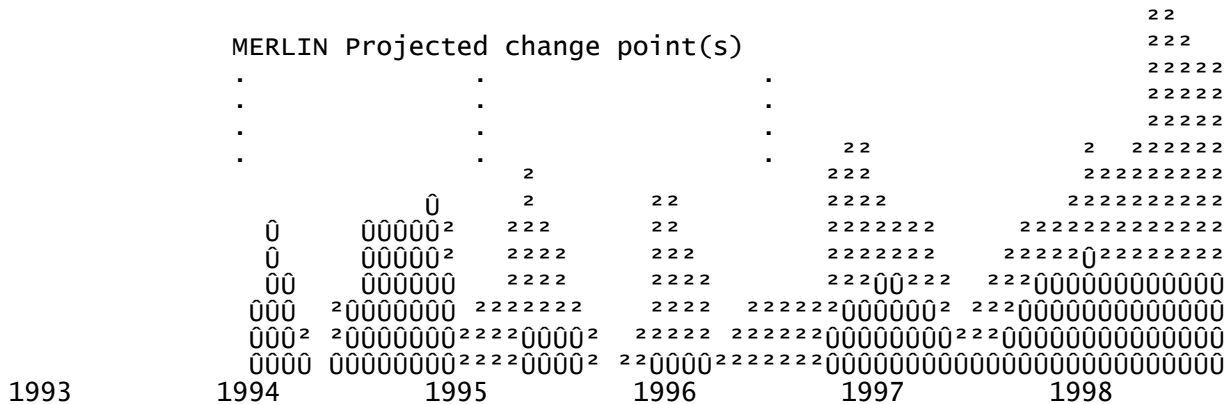
WORLD TRADE CENTER BOMBING/WACO STANDOFF (1993-8)

The world Trade Center bombing and the waco standoff both occurred over the same weekend of February 26-28 1993. Both came rocketing back into public prominence in mid-April 1995 on the heels of the Oklahoma City Bombing.

Could this resurrection of events be related in time? Perhaps, even anticipated? Let's take a look at the MERLIN timetraks(r) for several of the key players.

GENESIS: 02/26/1993 "THE MERLIN PROJECT" (617)499-7755 RUN: 02/28/1993

WORLD TRADE CENTER (NY) BOMBING, February 26, 1993



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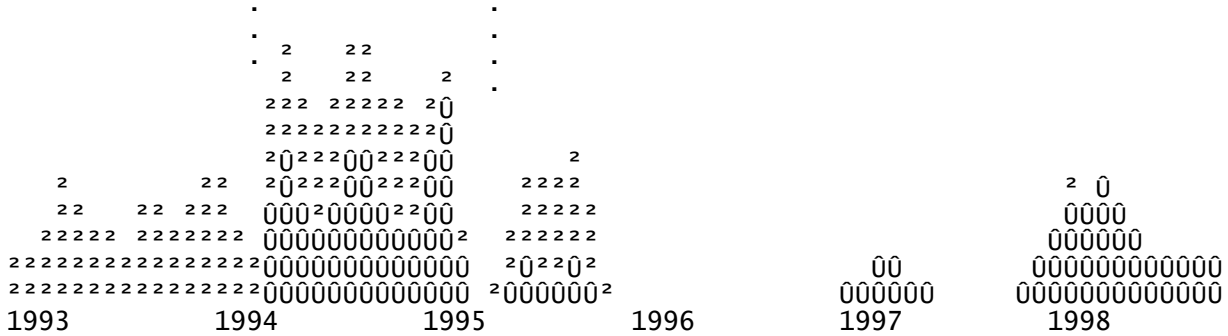
TRADE CENTER BOMBING -- first run February 28, 1993. This timetrak(r) highlights three, possibly four likely transition points. These could indicate additional terrorist activity, the capture and/or trial of suspects or direct repercussions from the original event. In early 1994 there is a rapid uptake of the trendline followed in the spring of 1995 with the appearance of a pronounced and persistent display of highly fluid (internal) factors that often correspond to intense short-term activity. This activity becomes fully engaged in 1996, with a dramatic trendline of mixed time models predominating beginning in late 1996 and peaking in mid-1998. Watch for change points occurring at each of these junctures (approx) Feb 94, Mar 95, Nov 96 and possibly Jun-Aug 98.

Remember, that scenarios such as this represent our attempt the fit a plausible story line to a set of time intervals which MERLIN has indicated will be highly eventful. The intervals will be correct more often than our speculations concerning their content.

GENESIS: 02/28/1993 "THE MERLIN PROJECT" (617)499-7755 RUN: 04/02/1993

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WACO STAND-OFF, commenced February 28, 1993 (same weekend)

MERLIN Projected change point(s)

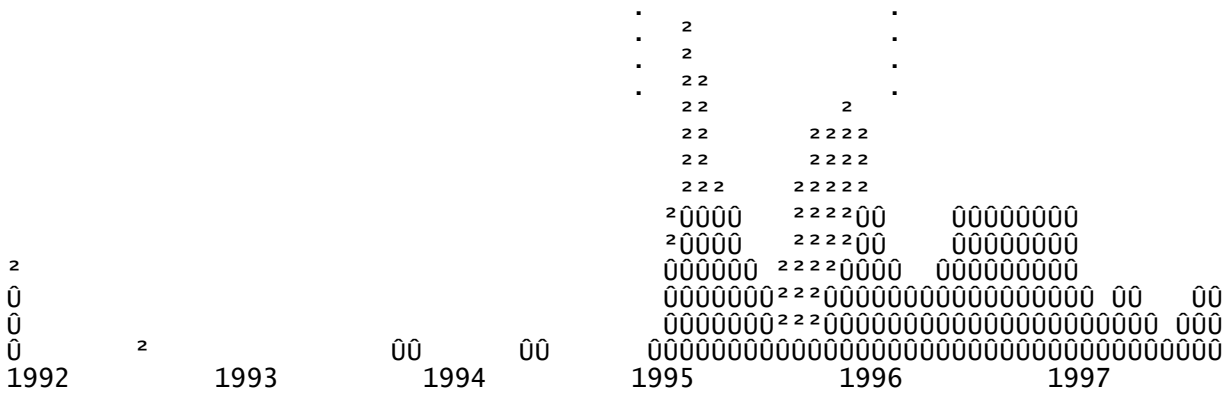


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GENESIS: 04/23/1968 "THE MERLIN PROJECT" (617)499-7755 RUN: 05/10/1995

TIMOTHY McVEIGH, born April 23, 1968

MERLIN Projected change point(s)

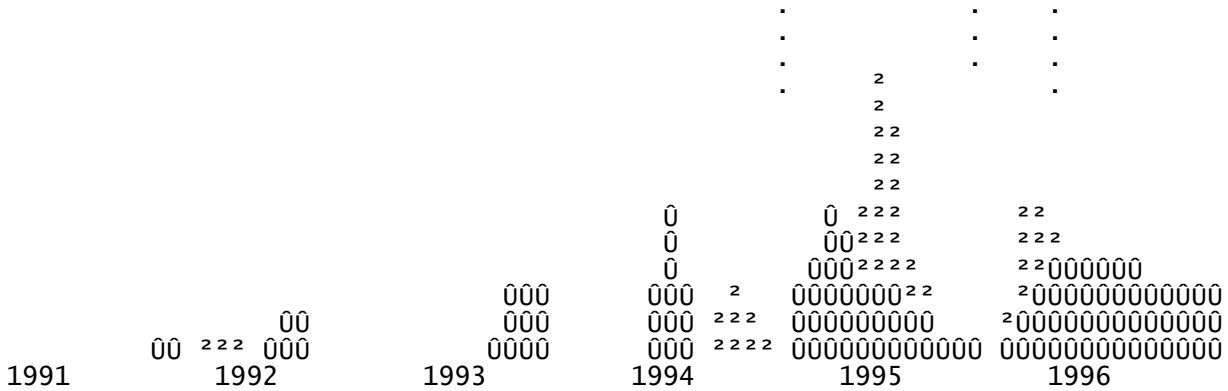


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TIMOTHY McVEIGH -- first run May 10, 1995. Timothy McVeigh's chronograph is a lynchpin in this series of timetraks(r). The "run" shows virtually no activity since 1991, when there was a previous 12 month interval and before that, an 24 month period of activity in 1986-7. This timetrak(r) indicates a very intense 12 month spike from Feb 95 thru Feb 96 with the most interesting portion of the trendline in very early 1995 and again in late summer 1995. This is followed in late winter '96 by a constant that extends unbroken for several years. There are news reports circulating that McVeigh was detained at a gun show in the several months preceding the Oklahoma City bombing for making threats against the government. A MERLIN timetrak(r) such as this would have indicated the efficacy of long-term surveillance of McVeigh.

CHECHNYA, February 24, 1944

MERLIN Projected change point(s)

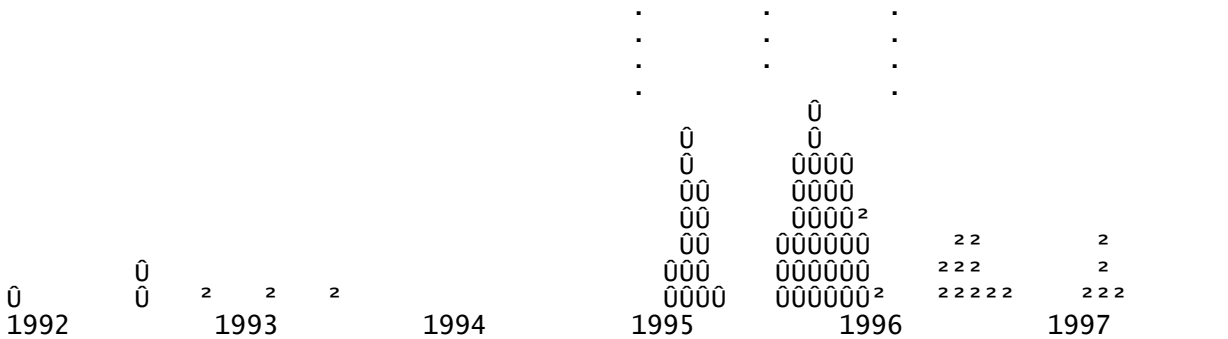


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GENESIS: 12/11/1994 "THE MERLIN PROJECT" (617)499-7755 RUN: 01/08/1995

CHECHNYA -- fighting commences, December 11, 1994

MERLIN Projected change point(s)



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Both of the above Chechnian "runs" indicate three phases within the first 12 -18 months. The first launches abruptly in late '94/ early '95 after several years of little or no activity and lasts 6 months. The second begins mid-way through 1995 and lasts roughly 6 - 9 months. And the third begins in early 1996 and appears to be a constant that continues for a number of years.

NOTE: We have made no formal release of projections about Chechnya to date although the "runs" were made available to CNN President Tom Johnson in January 1995. While only two "genesis dates" were available to us to compute a projection, the similarity of the chronographs leads us to believe that they will prove to be as accurate over the term of the conflict as they

have been to date.

CONCLUSION

These two Chechnian "runs" suggest a conflict of 12 - 15 months duration occurring in at least two distinct stages followed by a resolution or stalemate commencing in approximately Feb '96. If as indicated, the conflict persists throughout 1995, it would not be unlikely for Chechnya to play a significant role in the upcoming Russian Presidential elections currently slated for June 1996.

BOSNIA (1992-7)

Finding a workable "genesis date" for the Bosnian situation, like seemingly everything else about this conflict has been frustrating and muddled. Two dates have been highly useful, however, and remarkably accurate over the last 2 or 3 years. The first is initial date and time for the commencement of world war I (which began in Sarajevo in June of 1914.) This date inadvertently (also) marked the beginning of a 75 year "interruption" of the historical conflict between Croatsians, Muslims and ethnic Serbs. The second, occurring in April 1993, marked the UN authorized commencement date for overflights.

After a series of fits and starts in the period 1992-94, the genesis date of June 28, 1914 shows an increased and sustained level of activity beginning in late 1994 and culminating in late '95/early '96. The overflight date of April 12, 1993 shows a peak in the initial genesis year and then a declining level of performance over the next two years with the transition point also coming by early 1996.

Both timetraks(r) indicate some constant developing in the period after 1996 but preceded by a minimum of 18 months (which we have just entered) of highly unstable activity.

In passing, it should be noted that an attempt has been made on a number of occasions to obtain two critical dates; the birthdates for Serb leader Radovan Karadzic and Bosnian President Slobodan Milosevic without success.

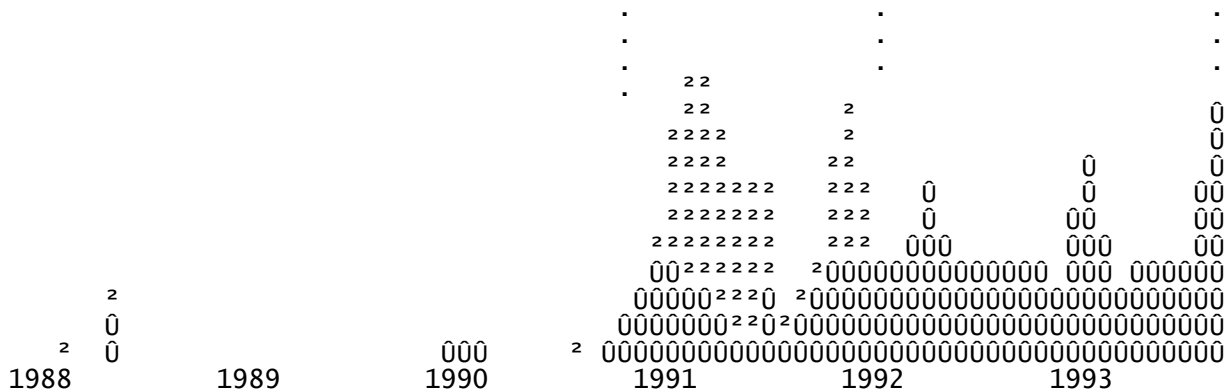
GENESIS: 06/28/1914 "THE MERLIN PROJECT" (617)499-7755 RUN: 12/31/1992

WORLD WAR I, begins June 28, 1914 (in Sarajevo)
Key date in the current Bosnian conflict

MERLIN Projected change point(s)

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This ISRAEL "run" provided an excellent preview of the timetable for events later in that year and over the following 3 - 5 years. This would make sense since much of what goes on in the region can be categorized as either pro or anti-Israeli and would undoubtedly impact on that chronograph(r).

You'll notice that the trendline demonstrates a pronounced and sustained wave of activity beginning in the fall of 1990, about November. The subsequent 12 - 18 months introduces a highly unstable line composed of mixed time models. This is generally MERLIN's signature for an event sequence of significant importance, relative to the period just preceding it. The wave appeared to have two stages. The first indicated 12 - 18 months of uncommon activity, followed by a constant of several years duration.

Based on this chronograph(r), at the time of the June 19, 1990 ABC Radio program, we suggested the likelihood that an end to the Intafata might be imminent, overtures towards peace talks beginning (or conversely some significant regional conflict) and a change of Israeli governments by or around the end of the initial 18 month period of projected activity.

Although this graphic was not designed to pinpoint the scope of Saddam's later shenanigans, it clearly captured what we now know was the buildup to and time coordinates of DesertStorm. Later, it also turned out that Shamir did resign less than 24 months later, the Intafata ended and peace talks were initiated.

It should also be noted that a highly charged and historically accurate start date (genesis) is essential to MERLIN's ability to deliver accurate and useful timetraks(r). May 14, 1948 is just such a date in that it is celebrated or reviled as the birth of the state of Israel.

DESERTSHIELD (1991)

Saddam Hussein invaded Kuwait on August 2/3 1990. It's not a date MERLIN would have advised, at least not for any long term gain. As you can plainly see, while there is a spike of activity in the first quarter of 1991, the ability of the August 1990 genesis date to produce any sustained activity is nil. When all was said and done, that ill-timed choice was perhaps a crucial factor in producing a short-lived invasion and the later success of DesertStorm. Compare the MERLIN "runs" for the initial invasion date (8-2-90) and the beginning of the air war, below. The invasion date chronograph suggested a resolution of the matter would occur by Spring, 1991. It did. The "resolution" was DesertStorm (1-16-91.)

