

PAM, TAM, SAM, SOM DETAILED EXPLANATION

Each technology defines a **SAM** (Served Available Market). Understandably, "Like and Competing Technologies" become the primary criteria for the product segment (**SAM**) definition. The **SAM** concept provides a basis for higher degree of accuracy of product (company) market share measurement. When newer products enter the marketplace, they become classified by a specific **SAM** definition. Therefore, each new competitor's product, based upon a "like or similar" technology becomes part of a **SAM** and the creation of an individual **SOM** (a subset of the **SAM**) represents the company's market share for the defined product. The **SOM** (Share of Market), specific to a company, provides a logical approach for market share determination. The **SAM/SOM** concept allows the basis to exist for "apple to apple" comparisons thereby minimizing the confusing "apple to orange" situation.

Therefore, "Market Share Analysis or SOM" is determined within the market **SAM** encompassing each company. *It is this conceptual approach (**SAM/SOM**) that provides the basis for answering a common question asked by many marketers involved with the marketing analysis of high technology products: "How could a competitor's product be growing when the overall market is not expanding?"* The answer: The benefit of the technology defining the marketed product allows the acquisition of market share at the expense of a less superior competitor's technology. These two different **SAM's**, which may be part of a **TAM** (Total Available Market), is illustrated in 1.0 below. The illustration depicts this as **SAM 1** possibly growing at the expense of **SAM 2** (which may be contracting due to **SAM 1's** superior technology), while the **TAM** (Total Available Market) remains constant (not growing).

Given the probability that a company's product, based upon a specific technology, may obtain 100% share of a market application, the **TAM** (Total Available Market) concept takes into account that possibility. *However, a common mistake made by many marketers is market share based upon the **TAM**. It is important to note that market share is never, ever, based upon a **TAM** measurement.* Rather, the **TAM** is used to define the entire accessible market for a given technology upon which a company's product is based. The **TAM** may be composed of any number of **SAM's** and each **SAM** may represent any number of individual, company specific **SOM's**. Each **SAM** represents competing technologies for the **TAM** application. ***TAM's** always include one or more technologies targeted toward an application (end use).*

For example; surgical procedures required for ameliorating a specific patient condition may illustrate a **TAM**, conceptually. A few years ago, "Gall Bladder" operations required significant time for completion that included patient recovery. Currently, most "Gall Bladder" operations are "laparoscopic cholecystectomy" i.e. completed via "laparoscopic" techniques on an outpatient basis. The **TAM** parameter for "Gall Bladder" affliction is mutually exclusive of the surgical methodologies and may be defined as that number of individuals, based upon a combination of different, documented surgical procedures, designed to eradicate an individual's "infected gall bladder condition". Laparoscopic cholecystectomy, for example representing **SAM 1**, may eventually approach the size of the **TAM** at the expense of other different surgical procedures utilizing different technologies for their methodology, represented by **SAM 2** and **SAM 3**. Given the assumption that major surgical intervention for Gall Bladder removal is a diminishing surgical procedure due to the superior technological benefit of a laparoscopic surgical procedure, represented by **SAM 1** (laparoscopic methods exhibit convenience, lower costs and reduced clinical complications) in essence become the market drivers for **SAM 1**. Contrasted to **SAM 2** that denotes older, more antiquated surgical methodology of which these procedures historically have translated into longer hospital stays, higher costs and increased clinical complications; common sense indicates a reduction in the demand for older procedures defined by **SAM 2**. Hence, **SAM 1** (newer procedures) grows at the expense of **SAM 2** (older

procedures) and may eventually be equal to the size of the **TAM** (all patients requiring Gall Bladder surgery).

Important to any market sizing analysis is the marketer's efforts to define specific parameters describing the **PAM**. The **PAM** (Potential Available Market) is largely dependent upon the marketer's "view of the world". For example, the marketer may define the **PAM** as representing the maximum number of individuals afflicted by a disease based upon a specific ICD9 or ICD10 code or may simply define the **PAM** as the actual revenue generated worldwide by any group of substitutive/complementary products. The **TAM** based upon the **PAM** definition can be defined as a percentage of population of individuals exhibiting a specific disease state and, those individuals, having access to treatment within a country or the world at large. These individuals have become a subset of the **PAM** that is the **TAM**.

Another example; the **PAM** may represent the maximum number of institutions within a country where an electron diagnostic instrument (digital imaging device) could be located. Wherein, the **TAM** here is defined as the number of institutions where an electronic diagnostic instrument (digital imaging device) is located (installed base). In essence, the **PAM** is definitional and the subsequent **TAM**, **SAM** and **SOM** are based off that definition.

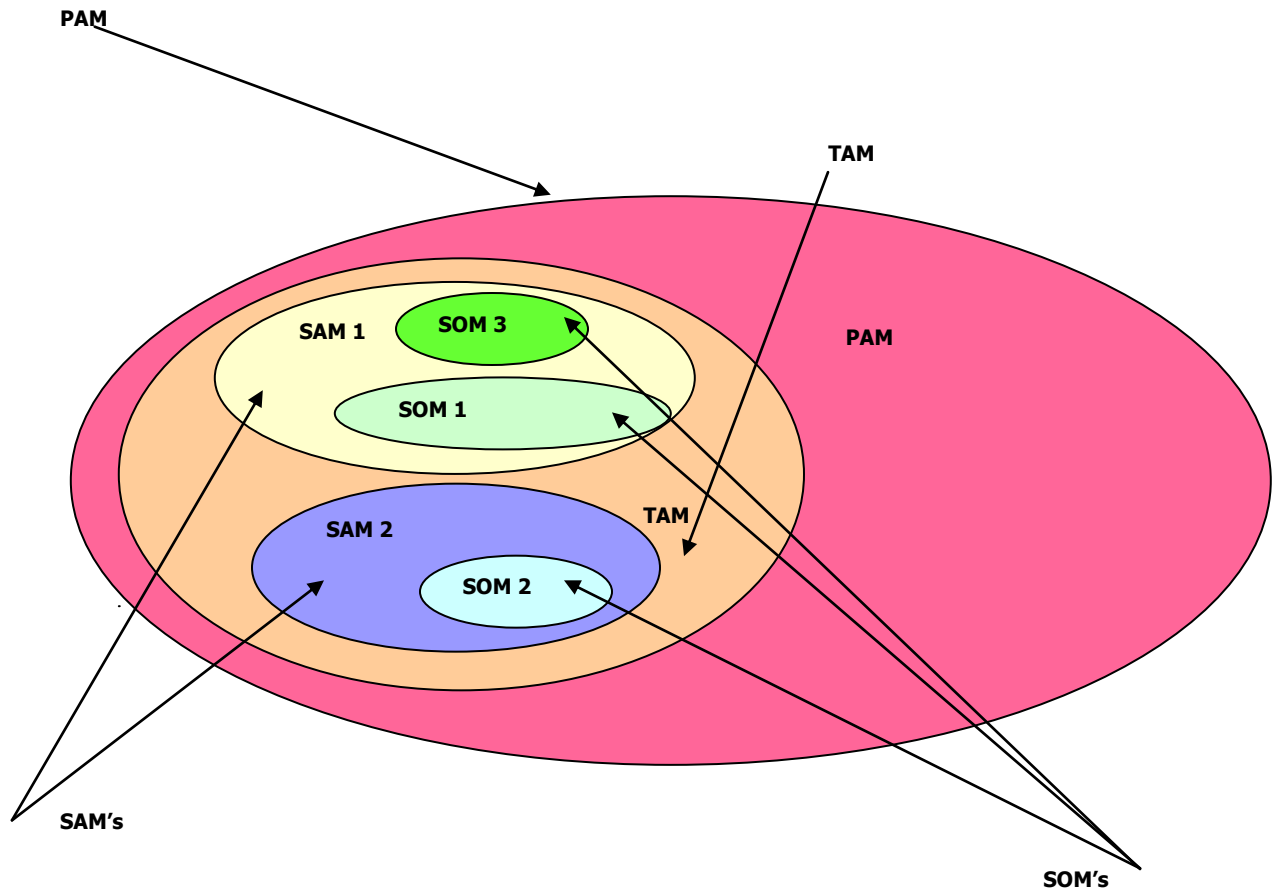
*It is important that the "definition" for the **PAM** be initially established before any parameters describing the **TAM** are defined. The **PAM** definition must be integrated into the **TAM**, **SAM** and **SOM** parameter formulation.*

Interestingly and on a final note, the **PAM** expands (grows) or contracts (declines) based upon fundamental changes in the marketer's basic elements of the **PAM** definition i.e. demographics (populations), institutional locations, revenue, etc.

The basic Tenets of the **PAM/TAM/SAM/SOM** relationship:

1. The **TAM** is never greater than the **PAM** (**TAM** < **PAM**)
2. The **SAM** is never greater than the **TAM** and may be equal to the **TAM** (**SAM** = to or < **TAM**)
3. The **SOM** is never greater than the **SAM** and may be equal to the **SAM** (**SOM**= to or < **SAM**).
4. The **TAM** never equals the **PAM** (**TAM** < **PAM**).

Illustration 1.0
Conceptualization of PAM/TAM/SAM/SOM



Legend

PAM represents "Potential Available Market"
TAM represents "Total Available Market"
SAM represents "Served Available Market"
SOM represents "Share of Market"